MEASURING VALUE CREATING GROWTH

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Abstract

'Growth' as a concept is often not very well understood. Growth may be measured in a variety of ways (e.g., growth in turnover, earnings, earnings per share, assets, and shareholders equity). Investors and other capital providers generally find it attractive to invest in 'growth firms.' For instance, earnings per share (EPS) figures are widely published and used by investors. An increase in EPS is seen as a signal of improved profitability. Likewise, growth in earnings measures such as EBIT, EBITA, EBITDA etc. seem to indicate that firms are value creating. Our paper discusses if and under what conditions growth in accounting variables (accounting numbers and financial ratios) is value creating. We find that growth in one-periodic earnings measures does not necessarily create wealth for shareholders. Only growth in economic income is value creating. Our analysis also provide evidence that users of accounting information should be aware of the quality of growth and distinguish between growth based on transitory vs. permanent components of earnings. Our analysis finally documents that growth in earnings per share or return on equity caused by share repurchases has no economic significance.

Keywords: Value creation, growth, financial ratios

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Introduction

This paper[31] focuses on how growth may be measured by one-period earnings ad financial ratios. Growth in earnings is based on the underlying performance in a firm, including market growth, rivalry in the industry and the firm's strategy. Measurement of the growth in financial ratios and earnings measures is therefore a mirror of how the firm is performing against its competitors. Growth is measured for a variety of analytical purposes. For instance the service group ISS[32] had in its strategy 'Create 2005' a target to at least double:

- Earnings pr. share, EPS (before goodwill amortisation)
- Turnover
- Earnings before interests and taxes (EBIT)

Royal Unibrew (the former Bryggerigruppen) provides another example. As stated in the annual report for 2001, management were compensated if they were able to increase earnings before taxes by at least 10%:

> For 2001 the target of growth in 'earnings before taxes' by at least 10% has not been met, and, accordingly, management will not be awarded stock options based on the financial results for 2001……. The board of directors has agreed to extend the options package to include the financial year 2002, where options will be awarded if earnings before taxes are at least DKK 270 million (translated from Danish).

The way Bryggerigruppen compensate management is not unique. Banghøj (2006) finds that one-period financial measures such as 'turnover', 'earnings before interests and taxes' and 'earnings before taxes' are commonly used performance measures in bonus contracts. As demonstrated in this paper, growth in these one-periodic financial measures does not necessarily increase the market value of equity. The purpose of this paper is to answer the following questions related to growth:

- Is growth always value creating?
- What is the quality in growth?
- Is growth 'permanent'?
- Is growth in financial ratios caused by share repurchases always value creating?

These issues will be addressed below.

[31] This paper is inspired by the chapter on growth in the book "Regnskabsanalyse for beslutnings- tagere" by Christian Petersen and Thomas Plenborg.

[32] ISS has approx. 310,000 employees and a turnover of 46,440 DKK millions in 2005 (ISS Annual Report 2005) making it the largest firm of its kind in the world.

The paper is organized as follows. Section 2 discuses under what conditions growth is value creating followed by an analysis of growth in EVA in section 3. Finally, section 4 concludes the paper.

Does growth always create value for the owner?

In practice a variety of growth measures are used, including growth in for instance:

- Turnover
- EBIT
- Net earnings
- Free cash flow
- Dividends
- Invested capital
- EVA

Figure 1 illustrates the growth in various financial items for Satair, a firm listed on the Copenhagen Stock Exchange:

	2001	2002	2003	2004	Avg.
Turnover	20%	2%	3%	17%	10%
EBIT	34%	-40%	-21%	-6%	-8%
Net earnings	34%	-65%	22%	-24%	-8%
Invested capital	69%	0%	-12%	26%	21%
Owners equity	29%	8%	-8%	19%	12%
Free cash flow	-199%	-126%	368%	-186%	-36%
Sustainable growth rate	33%	7%	9%	6%	14%

Figure 1. Satairs annual report: Growth in financial items and earnings measures

Turnover, invested capital and equity grow by 10 - 21% pr. year on average. Furthermore, the sustainable growth rate average 14%.[33] These figures indicate that Satair is a growth firm. However, an analysis of growth in accounting based performance measures show an average growth rate of – 8% for net earnings and EBIT The free cash flow also exhibit negative growth, which is (mainly) due to investments in fixed assets.

This raises the question whether or not Satair is a growth firm. Based on the growth in activity Satair seems to be a growth company. On the other hand, the development in earnings measures suggests that Satair is a negative growth firm.

From an investors point of view it is not sufficient that earnings are positive. Return on invested capital must exceed the cost of capital before value is created. Mathematically, this can be shown in two ways:

Economic income (EVA) = (ROIC – WACC) · Invested capital

Economic income (residual income) = (ROE – k_e)· Equity

WACC = Weighted average cost of capital

k_e = Cost of equity

Positive economic income (EVA and residual income) is, hence, a necessary condition to assure value is created. Growth is only of value if economic income is growing.

EVA for Satair for the period 2001 – 2004 is shown in figure 2. WACC is assumed to be 9%[34] throughout the period.

[33]

$$g = \underbrace{ROIC}_{Operations} + \underbrace{(ROIC - I)\cdot\frac{D}{E}}_{Financialleverage}\cdot(1-t)\cdot\underbrace{(1-PO)}_{Dividendpolicy}$$

where g = self financed growth, ROIC = return non invested capital, I = interest rate from borrowing, D/E = debt to equity ratio, t = corporate tax rate and PO = payout ratio

[34] Ideally, WACC should vary over time to take into consideration changes in the underlying level of interest rates, risk, capital structure and corporate tax rate.

(DKKm)	2001	2002	2003	2004
ROIC after taxes	24.7%	8.9%	6.9%	7.4%
WACC	9.0%	9.0%	9.0%	9.0%
Invested capital, beg. of year	276.7	466.5	468.6	412.6
EVA	43.6	-0.6	-9.6	-6.5
Growth in EVA		-101%	-1,465%	32%
Share price	220	133	108	119

Figure 2. Annual reports for Satair – EVA calculations (balance sheet items are based on beginning of year balances)

The development in EVA is negative in the period 2001 - 2004. In 2001 Satair generates DKK 43.6 million EVA but EVA is negative in each of the following years. Consequently, Satair destroys value for its shareholders in the period 2002-2004. It is evident from the above calculations that growth in turnover and invested capital has not contributed to the profitability in Satair. On the contrary, while Satairs turnover and invested capital has increased, EVA has become negative.[35] From an investors point of view Satair is *not* a growth firm. On the contrary the firm seems to experience a negative growth measured by the development in EVA. Shareholders have also reacted negatively - Satairs share price dropped by almost 50% in the period 2001-2004.

Value creating growth, that is Growth in EVA, can be achieved by any of these activities:

- Optimization of the existent business (increasing ROIC)
- Investments in profitable businesses (growth in invested capital)
- Reduction in the cost of capital (WACC)

In practice it is limited, what a firm can do in order to reduce cost of capital. Loan providers and owners operate on a competitive marked and it might be assumed that they provide financing on marked terms; that is prices are efficient and take into consideration the underlying risks in the firm. Both theoretically and in practice it is questioned if a change in the capital structure reduces the cost of capital (Parum, 2001).[36] The firm is consequently forced to focus on optimizing the core business and invest in profitable projects.

In the short run optimization of operations will contribute to growth in EVA. There will, however, be an upper limit for how much operations can be improved, long term growth in economic income must come from investments in the existent business or in new businesses.

Assume that Satair in the period 2002-2004 had been able to maintain the same return on invested capital as in 2001, i.e. ROIC stays at 24.7% in all four years. Satairs EVA would under this assumption increase over time (results provided in figure 3).

EVA grows from DKK 43.6 million to DKK 64.9 million and follows exactly the development in invested capital. The example demonstrates that long-term growth in EVA must come from investments in profitable projects.[37]

Analysis of growth in EVA

An analysis of growth in EVA is important in order to prevent potential non-valid conclusions. It is relevant to ask the question: 'What are the underlying reasons for growth in EVA?' For example, in valuation of firms the estimated value is affected by the firm's ability to create positive economic income. A long-lasting growth in EVA will have a more favourable effect on the value of a firm than growth in EVA caused by transitory earnings (e.g., gains from disposal of fixed assets). In this section the financial items, which drives growth in EVA, are presented and discussed.

In order to get a structure in the growth analysis the DuPont-model proves useful. This model is shown in figure 4.

Figure 4 demonstrates that growth in EVA is driven by changes in the firms profitability (ROIC) and cost of capital (WACC). As pointed out in the previous section, a firm has limited potential for changing the level of cost of capital. Thus, the focus will be on changes in profitability of core business. Furthest to the right in figure 4 a number of factors that are related to operations and thereby growth in EVA are provided. It is important to assess the 'stability' of growth. It is therefore more attractive, if the changes (growth) in the financial ratios are permanent (long lasting).

[35] It can be discussed, if based on the above calculations it is possible to conclude that investments in Satair are unprofitable. The answer to this question is at first 'no'. It can, however, be shown that ROIC has a tendency to be undervalued in growth firms. Secondly, it is possible that investments will provide a reasonable return in the long run.

[36] Private equity funds aggressive use of loan capital challenges this argument.

[37] Profitable projects are defined as projects, where returns are higher than cost of capital.

(DKKm)	2001	2002	2003	2004
ROIC (beginning)	24.7%	24.7%	24.7%	24.7%
WACC	9.0%	9.0%	9.0%	9.0%
Invested capital, beg.	276.7	466.5	468.6	412.6
EVA	43.6	73.4	73.8	64.9
Growth in EVA		69%	0%	-12%

Figure 3. Satairs annual reports – EVA calculate by constant ROIC (balance sheet items are based on beginning of the year figures)

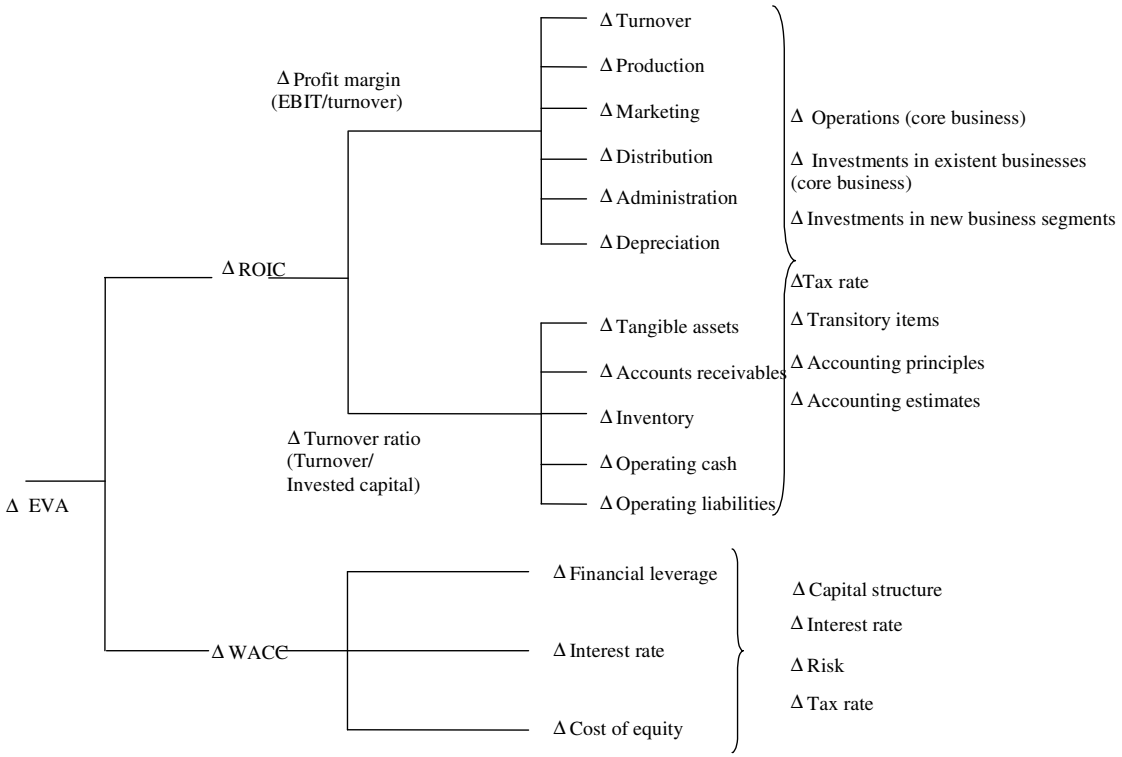


Figure 4. Structure for analysis of growth in EVA

Growth in residual income due to improvements in core business

Generally, it may be expected that earnings from the core business is more attractive than earnings of transitory nature, as earnings from core business to a larger extent may be expected to be permanent.

Changes in the core business refer to an optimization of operations in order to improve profitability. Optimizing the core business may be obtained by for example:

- Employing a more profitable price politics
- Selling fewer but more profitable products
- More efficient production methods, including outsourcing to low-wage countries
- Initiating new marketing strategies
- Optimizing administration
- Optimizing invested capital (for example by reducing inventory and accounts receivables)

Likewise, investments in the existent business or in new businesses may provide longer lasting growth in EVA.

Growth in residual income due to non lasting (transitory) earnings

Examples of elements, which all appear to contribute to growth in EVA, but are either transitory in nature or represents an 'artificial' improvement in the underlying business, are listed below:

- Extraordinary items
- Gains and losses from sales of fixed assets
- Restructuring costs
- Non continuing activities

- Changes in accounting estimates
- Changes in applied accounting policies

A positive growth in EVA caused by these accounting items will (should) be disregarded by analysts or might alternatively be treated as non lasting growth. It is illustrated in the following example.

Example: Changes in accounting estimates

Consider a firm with the following characteristics:

- Investments per year: DKK 1,000
- Expected useful life of each investments: 2 years
- EBITDA pr. investment: DKK 1,200
- Corporate tax rate: 50%
- Fixed assets equals invested capital
- No growth in investments

Based on these assumptions growth in the firms residual income is as follows, when the firm reaches a steady state condition.

WACC	10%
EBITDA	1,200
Depreciation and amortisation	-1,000
EBIT	200
Taxes (50%)	-100
NOPAT	100

Year	1	2	3	4	5	6
NOPAT	100	100	100	100	100	100
Tangible fixed assets	500	500	500	500	500	500
Cost of capital	-50	-50	-50	-50	-50	-50
EVA	50	50	50	50	50	50
Growth in EVA		0%	0%	0%	0%	0%

Figure 5. Growth in EVA before changes in accounting estimates

				Changes in estimates			
Year	1	2	3	4	5	6	7
WACC	10%						
EBITDA	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Depreciation and amortisation	-1,000	-1,000	-1,000	-833	-667	-1,000	-1,000
EBIT	200	200	200	367	533	200	200
Taxes (50%)	-100	-100	-100	-183	-267	-100	-100
NOPAT	100	100	100	183	267	100	100

Year	1	2	3	4	5	6	7
NOPAT	100	100	100	183	267	100	100
Tangible fixed assets	500	500	500	667	1,000	1,000	1,000
Cost of capital	-50	-50	-50	-67	-100	-100	-100
EVA	50	50	50	117	167	0	0
Growth in EVA		0%	0%	133%	43%	-100%	0%

Figure 6. Growth in EVA after changes in accounting estimates

As expected there is no growth in EVA. NOPAT and the cost of capital are constant over time.

Assume that the firm changes accounting estimates in year 4, so that the useful lifetime for tangible fixed assets is extended from 2 to 3 years. It will, in the short term, change the amounts, which enter the EVA calculations.

As is evident from figure 6, depreciations are lower due to the change in the estimated lifetime for tangible fixed assets. Also, the cost of capital

increases due to increases in the book value of invested capital (fixed assets). The total effect is that economic value added changes from 50 to 167 in year 5. Looking further ahead EVA reverses to a 'permanent' level of 0 (zero). Growth in EVA caused by changes in accounting estimates is, hence, non-lasting. It disappears, when changes in applied accounting policies (accounting estimates) are fully neutralised. Value creation is – not surprisingly - unaffected as changes in accounting estimates have no cash flow effects. Therefore, the growth in EVA in years 4 and 5 is artificial.

In conclusion, growth in economic income caused by an improvement in the core business is preferable, as it is assumable more 'permanent' than increases in earnings based on the disposal of assets and/or changes in accounting estimates (i.e. transitory items).

The above example illustrates the importance of analysing the quality of growth in EVA.

Is growth 'permanent'?

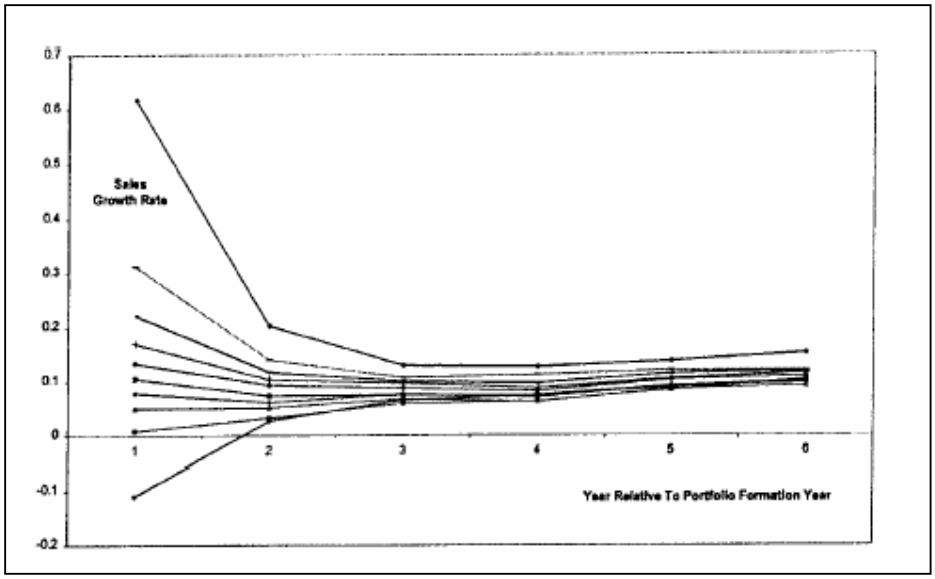
One of the purposes with growth analysis is to estimate future growth. It is done by comparing the historical growth rate in turnover with future growth opportunities in the industry. The potential growth will be affected by the underlying market growth, rivalry among competitors, threats from potential entrants, the relative competitive strengths and weaknesses of the firm etc.

It was argued above that growth caused by an improvement in the core business is longer lasting than growth based on transitory accounting items. The question is, how stable each accounting item and financial ratio is over time. Stability in the accounting items makes it easier to forecast future earnings (for instance used as input to a valuation model). Nissim and Penman (2001) examines the stability in a number of financial ratios for American firms in the period 1969-1999. Specifically, they examine how accounting items and financial ratios correlate over time. They examine how growth in turnover in year 0 is correlated with growth in turnover in the following five years. The higher the correlation, the more stable the growth in turnover.

Year relative to first year (year 0)	1	2	3	4	5
Growth in turnover	30.9%	11.5%	10.3%	10.6%	11.5%
Profit margin (permanent earnings)	82.8%	72.5%	66.4%	62.8%	60.5%
Turnover ratio	94.7%	89.4%	85.7%	83.0%	80.8%
ROIC (including permanent and transitory earnings)	66.5%	48.5%	37.7%	32.0%	29.8%
ROIC (transitory earnings only)	37.6%	28.4%	22.3%	21.2%	18.9%

Source: Nissim and Penman (2001)

Figure 7. Measurement of the stability in financial ratios (correlations coefficient)



Source: Nissim and Penman (2001)

Figure 8. The stability in growth in turnover

The correlation between growth in turnover last year (year 0) and this year (year 1) is only 30.9%. It provides some evidence of a fairly low stability. It is also illustrated in Figure 8.

It is evident from the figure that an atypical high or low growth rate in turnover is followed by more 'normal' growth rates. After a period of just 3 to 4 years growth is mean reverting.

Figure 7 reports the correlations coefficients for profit margin, turnover ratio, ROIC (including both permanent and transitory earnings) and ROIC (only transitory earnings). These correlation coefficients reveal that profit margins and turnover ratios are relatively stable over time. Especially the turnover ratio appears stable; the correlations coefficient between the turnover ratio six year ago and today is 80.8%. That is there is not the same tendency for this ratio to move towards a ratio of the same size for all firms over time.[38] A comparison of ROIC calculated inclusive of both permanent and transitory accounting items and only transitory accounting items show - not surprisingly - larger correlation coefficients for ROIC estimated based on permanent accounting items only. Further, as expected accounting items that are permanent (core business) are 'longer lasting' than transitory earnings. These results supports that it is important to separate transitory from permanent accounting items cf. the previous section. Nissim and Penmans (2001) results also support economic theory. It seems impossible to maintain high growth rates in the long run. There is a tendency for financial items to converge against a long term mean value. *It is a major point to be considered in forecasting*.

Is growth in financial ratios caused by share repurchases always value creating?

In the past years it has become still more common to buy back own shares rather than paying out excess cash as dividends. An argument for share repurchases is that financial ratios, including earnings per share (EPS), improve and, consequently, this should have a positive effect on firm value.

As reported below the major part of listed blue chip firms on the Copenhagen Stock Exchange has purchased own shares.

This development seems to continue:

Firms buy own shares
Financial analysts believe that the size of extraordinary dividends and share repurchases will increase dramatically over the coming years due to higher earnings.

Jyllands Posten 15 November 2004

At first it appears illogical that share repurchases increase the value of the firm. The shares are bought in free trade, that is to the current market value, and is financed by cash or the issuance of new debt. The effect, therefore, ought to be value neutral. Net financial obligations increase by the exact same amount as equity decreases due to the share repurchase. The firm and the investors have not become richer. The following example illustrates this point.

Example on share repurchases

The example is based on a firm that operates on a mature marked without growth. Competition is moderate, which ensures that return on invested capital equals investors' cost of capital. Due to lack of growth opportunities the firm is overcapitalised. As a consequence equity is four times net financial obligations. On a board meeting it is decided to buy back own shares. Share repurchases is financed by issuing new debt. The motive for the share repurchase program is that the CFO of the firm has announced that EPS and ROE will grow considerably, and it is expected to have a positive influence on the market value of the firm.

In the calculations taxes are ignored and return on invested capital equals the cost of capital (WACC). Accounting items and financial ratios are provided both before and after the share repurchase program:

[38] It might be explained by the fact that firms in different industries are generic different. Firms in the service industry tend to have a high turnover ratio. Production firms, on the other hand, are characterised by a low turnover ratio due funds being tied up (in assets).

	Firms in KFX that has bought own shares	
Name of firm	Has bought own shares	Has NOT bought own shares
Mærsk		√
Carlsberg	√	
Coloplast	√	
Danisco	√	
Danske Bank	√	
DSV Gruppen	√	
Falck (Group 4)	√	
GN	√	
ISS		√
Jyske Bank	√	
Københavns Lufthavn	√	
Lundbeck	√	
Nordea	√	
Novo Nordisk	√	
Novozymes	√	
TDC	√	
Topdanmark	√	
Vestas		√
William Demant	√	

Source: Own

Figure 9. OMXC20 firms that have bought own shares to be nullified

Accounting items:	Before share repurchase	After share repurchase
Invested capital	100,000	100,000
Net financial obligations	20,000	50,000
Equity	80,000	50,000
Number shares	800	500
Financial leverage	0.25	1.00
EBIT	10,000	10,000
Interest rate (5%)	-1,000	-2,500
Net earnings	9,000	7,500
Financial ratios:		
EPS	11.25	15.00
EPS growth		33.3%
ROIC	10.0%	10.0%
ROE	11.3%	15.0%

Figure 10. Consequences for EPS by share repurchases

As it appears from the example, the effect of the share repurchase program is a 33.3% increase in EPS (from 11.25 to 15.00). Likewise, return on equity (ROE) increases considerable from 11.3% to 15.0%. After the share repurchase program, EPS and ROE will remain at 15.00 and 15.0%, respectively. Consequently, there is a permanent change in the level of EPS and ROE. This supports that firm value should increase.

ROIC stays at 10%, which is not surprising, as only the capital structure changes. This speaks for an unchanged valuation of the firm. With respect to assess if shareholder value has been created, the calculations behind the cost of capital are provided. The calculations are shown both before and after the share repurchase program in order to show potential differences.

The calculations show that WACC remains constant at 10% (taxes and risk of bankruptcy is not considered). This signals that a change in the capital structure does not create value for shareholders.

Cost of capital:	Before share repurchase	After share repurchase
Risk free interest rate	4.0%	4.0%
Beta assets (operational risk)	1.5	1.5
Beta debt (financial risk)	0.25	0.25
Beta equity	1.8	2.8
Risk premium	4.0%	4.0%
Equity cost of capital	11.3%	15.0%
WACC	10.0%	10.0%
Valuation:		
Invested capital	100,000	100,000
EVA	0	0
Enterprise value	100,000	100,000
Net financial obligations	-20,000	-50,000
Estimated value of equity	80,000	50,000
Estimated price pr. share	100	100
P/E	8.9	6.7

Figure 11. Calculate of cost of capital before and after share repurchases

As a consequence of the increased financial leverage (changes from 0.25 to 1.0) equity owners request further compensation. The adjustment to the equity cost of capital is calculated as follows:

$$\beta_{eq} = \beta_{assets} + (\beta_{assets} - \beta_{debt}) \cdot \frac{\text{Net financial obligations}}{\text{Equity}} = 1.5 + (1.5 - 0.25) \cdot 1 = 2.75$$

Based on a systematic risk (β_e) on 2.75, cost of equity capital based on CAPM can be shown as:

$k_e = r_f + \beta \cdot$ risk premium = 4% + 2.75 · 4% = 15%

Thus, with the change in capital structure the equity cost of capital increases from 11.3% to 15.0%. Cost of capital on the remaining equity, thus, increases exactly as much as return on equity. Consequently, the firm does not create additional value due to changes in the capital structure:

Economic income (EVA) = (10% – 10%) · 100,000 = 0

Economic income (residual income) = (15% – 15%) · 50,000 = 0

Enterprise value is left at 100,000 and equity after share repurchase on 30,000 is reduced from 80,000 to 50,000.

If the firm is valued based on the P/E-ratio, the firm appears cheap. This conjecture is further supported by the fact that ROE has grown to 15%. The lower P/E, however, just expresses the increased risk in investing in the firm. Shareholders demands a higher return (cost of capital) as a compensation cf. above. It can also be shown by following P/E-relation:

$$\text{Before share buy back}: \frac{P}{E} = \frac{ROE - g}{ROE \cdot (ke - g)} = \frac{0.113 - 0.0}{0.113 \cdot (0.113 - 0.0)} = 8.9$$

$$\text{After share buy back}: \frac{P}{E} = \frac{ROE - g}{ROE \cdot (ke - g)} = \frac{0.15 - 0.0}{0.15 \cdot (0.15 - 0.0)} = 6.7$$

P/E decreases from 8.9 to 6.7 due to the higher cost of capital of 15%.

In conclusion, share repurchases is equivalent to a change in the capital structure. The underlying business is not affected by the share repurchases[39]. Share repurchases financed by debt will only be value creating[40] to the extent that it creates tax advantages (interest expenses are tax deductible).

In the above Example EPS grows considerable (33%). It is, however, far from certain that EPS increases by share repurchases. The condition for growth in EPS by share repurchases is that ROIC exceeds the interest rate on borrowing. EPS will grow only when this condition is fulfilled. Likewise, the consequences of share repurchases will be negative growth in EPS, if the interest rate on borrowing is higher than ROIC. This is illustrated in the below example:

[39] Unless share repurchases is at the cost of profitable investments.

[40] In the literature and in practice other arguments support share repurchases. Jensen (1986) argues that firms that are high on cash may be tempted to carry out investments that might often prove unprofitable. By paying out excess cash, firms (management) do not have this option. It is also argued that share repurchases improve the underlying liquidity in the stock. This argument seems, however, to be short sighted, as the number of shares after share buy back and cancellation of shares is fewer than before the share buy back program.

Before share repurchases	ROIC < Interest rate	ROIC = Interest rate	ROIC > Interest rate
EBIT	3,000	5,000	7,000
Financial expenses	-1,000	-1,000	-1,000
Net result	2,000	4,000	6,000
Number shares	800	800	800
EPS	2.5	5.0	7.5
Equity	80,000	80,000	80,000
Net financial obligations	20,000	20,000	20,000
Invested capital	100,000	100,000	100,000
ROIC	3%	5%	7%
After share repurchases			
EBIT	3,000	5,000	7,000
Financial expenses	-2,500	-2,500	-2,500
Net earnings	500	2,500	4,500
Number of shares	500	500	500
EPS	1	5	9
Equity	50,000	50,000	50,000
Net financial obligations	50,000	50,000	50,000
Invested capital	100,000	100,000	100,000
ROIC	3%	5%	7%
EPS-growth	-60%	0%	20%

Figure 12. Consequences for growth in EPS by different relations between ROIC and interest rate

Figure 12 exemplifies that a positive growth in financial ratios, including EPS, caused by share repurchases requires a ROIC that is higher than the interest rate. The above example further demonstrates that firms where management is compensated based on EPS or similar financial measures may find it advantageous to change dividend policy; so that dividends are paid to shareholders by means of buying back own shares. It might be one of the reasons why many of the larger listed companies from time to time buy back own shares.

Conclusion

The use of one-periodic earnings measures such as growth in turnover, earnings before interests and taxes and earnings before taxes does not necessarily create wealth for shareholders. Only growth in economic income is value creating. Banghøjs (2006) conclusions should be kept in mind. He finds that more than 80% of the bonus contracts that use financial measures are based on one-periodic financial performance measures such as turnover and earnings before taxes. A growth in these financial measures does not ensure that shareholder wealth increases. Firms should to a larger extend include invested capital as part of accounting based performance measures. Firms should also consider including cost of capital in their performance measures. This makes it possible to make calculations such as ROIC and EVA. The analysis also provide evidence that users of accounting information should be aware of the quality of growth and distinguish between growth based on transitory vs. permanent components of earnings. For example it is relevant to establish the historical level of growth in relation to forecasting or the assessment of manager's performance in the measurement period. The analysis also documents that growth in earnings per share or return on equity caused by share repurchases does not alter the underlying value creation. Finally, it can be concluded that growth should not be maximised but optimised.

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