Nike essay

1. What is the WACC and why is it of import to gauge a firm’s cost of capital? Do you hold with Joanna Cohen’s WACC computation? Why or why non?

Answer: The cost of capital refers to the maximal rate of return a house must gain on its investing so that the market value of company’s equity portions will non drop. This is a consonant rhyme with the overall firm’s aim of wealth maximization. WACC is a computation of a firm’s cost of capital in which each class of capital is proportionally weighted. All capital beginnings – common stock. preferable stock. bonds and any other long-run debt – are included in a WACC computation. All else equal. the WACC of a house increases as the beta and rate of return on equity additions. as an addition in WACC notes a lessening in rating and a higher hazard. The WACC of a house is a really of import both to the stock market for stock rating intents and to the company’s direction for capital budgeting intents. In an analysis of a possible investing by the company. investing undertakings that have an expected return that is greater than the company’s WACC will bring forth extra free hard currency flow and will make positive net nowadays value for stock proprietors. Therefore. since the WACC is the minimal rate of return required by capital suppliers. the directors in the company should put in the undertakings which generate returns in surplus of WACC.

We do non hold with Joanna Cohen’s computation sing the WACC from 3 facets: 1) When Joanna Cohen computed the weights or proportions of debt and equity. she used the book value instead than the market value. The book values are historical informations. non current 1s ; on the contrary. the market recalculates the values of each type of capital on a uninterrupted footing. hence. market values are more appropriate. 2) The cost of debt

should non be calculated by “ taking entire involvement disbursal for the twelvemonth 2001 and spliting it by the company’s mean debt balance. These historical informations would non reflect Nike’s current or future cost of debt. 3) She erroneously used the mean Beta from twelvemonth 1996 to 2001. The mean Beta could non stand for the hereafter systemic hazard. and we should happen the most recent Beta as Beta estimation in this state of affairs.

2. If you do non hold with Cohen’s analysis. cipher your ain WACC for Nike and be prepared to warrant your premises.

Answer: 1) Weights of equity and debt: Market value of equity = Current portion monetary value x Current portions outstanding = $ 42. 09 ten 271. 5m = $ 11. 427. 44mDue to the deficiency information of market value of debt. we could utilize the book value for computation: Market value of debt = Current part of long-run debt + Notes collectible + Long-term debt = $ 5. 4m + $ 855. 3m + $ 435. 9m = $ 1. 296. 6m We = $ 11. 427. 44m/ ($ 11. 427. 44m + $ 1. 296. 6m) = 89. 81 %

Wd = $ 1. 296. 6m/ ($ 11. 427. 44m + $ 1. 296. 6m) = 10. 19 %2) Cost of Debt: We can cipher the current output to adulthood of the Nike’s bond to stand for Nike’s current cost of debt. Po= $ 95. 6 N= 20? 2= 40 PAR= $ 100 PMT= $ 100? 6. 75 % /2= 3. 375By utilizing fiscal reckoner: r= 3. 58 % (biannual)So Rd= 3. 58 % x 2 = 7. 16 %3) Cost of Equity: Use 20-year T-bond rate to stand for riskless rate. as the rate of return of a T-bond with 20 old ages adulthood is the longest rate which is available right now. So Rf= 5. 74 % Use a geometric mean of market hazard premium 5. 9 % as Market

Risk Premium As we mentioned in Q1. the most recent beta will most relevant in this regard. so we will utilize B= 0. 69 Re= Rf+B (Market Risk Premium)

= 0. 0574 + 0. 69? 0. 059 = 9. 81 %4) WACC: Use revenue enhancement rate = US statutory revenue enhancement rate + province revenue enhancement= 35 % + 3 % = 38 %WACC= Wd x Rd x (1-T) + We x Re= 10. 19 % ten 7. 16 % ten (1- 38 %) + 89. 81 % ten 9. 81 % = 9. 26 %

3. Calculate the costs of equity utilizing CAPM. and the dividend price reduction theoretical account. What are the advantages and disadvantages of each theoretical account?

Answer: 1) Cost of Equity utilizing CAPM: Market Risk Free Rate (Rf) = 5. 74 % (20-year output on US Treasuries) Beta (B) = . 69 (most recent beta used as most relevant beta to cipher Nike’s rating) Market Risk Premium = 5. 9 % (Geometric Mean used as Historic Equity Risk Premium) Cost of Equity utilizing CAPM = Re = Rf + B (Market Risk Premium) Re = 9. 81 % = 5. 74 % + . 69 (5. 9 %)

Advantages:-CAPM includes systematic hazard by integrating Beta in the Cost of Equity expression. Using the stock’s Beta to cipher equity will supply a return rate based on how hazardous the stock is perceived by investors. The higher the hazard. the higher the Beta will be and will ensue in a higher needed rate of return on the investing. Systematic hazard can’t be diversified off. while unsystematic hazard can be diversified off by keeping a diversified portfolio. -CAPM proves to be a better theoretical account than others such as the Dividend Discount Model. because the rating behind

CAPM is based on hazard and rates of return while the Dividend Discount Model relies to a great extent on dividends and a growing rate.

Disadvantages:-When utilizing CAPM. it can be hard finding the estimation of Beta. Different investings may affect different hazards and the Beta used in ciphering CAPM should reflect the appropriate sum of hazard associating to the specific investing. -The risk free rates used in ciphering CAPM are continually altering as with the values of the investings in the market which make up the market hazard premium. The changeless alterations in the market can hold negative impacts on the rating of CAPM. -Another disadvantage in utilizing the CAPM in investing assessment is that investing assessment is premised on a long-run clip skyline. whereas CAPM assumes a single-period clip skyline. i. e. a keeping period of one twelvemonth. While CAPM variables can be assumed changeless in consecutive hereafter periods. market world frequently shows that this is non the instance.

2) Cost of Equity utilizing the Dividend Discount Model: Growth (g) = 5. 5 %Dividend (D0) = $. 48Share Price (P0) = $ 42. 09Cost of Equity utilizing Dividend Discount Model = Re = (D0 x (1+g) /P0) +g Re = 6. 7 % = (. 48 ten (1+5. 5 %) /42. 09+5. 5 %

Advantages:-Using the Dividend Discount Model is really easy to cipher because the expression is non complicated. There are no existent proficient or hard computations involved with utilizing this method. -The inputs that are used in the computations of this theoretical account are market information and can be easy obtained. -The Dividend price reduction theoretical account efforts to set a rating on portions. based on prognosiss of the amounts to be

paid out to investors. This should. in theory. supply a really solid footing to find the share’s true value in present footings.

Disadvantages:-The Dividend Discount Model relies to a great extent on the growing rate to cipher the rate of return. If growing slows or becomes temporarily negative. it can ensue in computations which may non truly represent hereafter expected returns. -This theoretical account is calculated utilizing dividends and can’t be used in cases where a company is non paying dividends. This is besides a disadvantage for any investing without a reasonably changeless turning dividend watercourse. -The Dividend Discount Model is really sensitive to minor alterations in input figures. If the growing rate alterations by 1 % the cost of equity will besides alter by that rate. -The Dividend Discount Model does non explicitly see the hazards which the company faces.

4. What should Kimi Ford urge sing an investing in Nike?

Answer: In order for Kimi Ford to do a determination sing an investing in Nike. she must compare an accurately deliberate WACC to the sensitiveness of equity value to dismiss rate chart shown in Exhibit # 2. The sensitiveness chart in Exhibit # 2 provinces that at a price reduction rate of 11. 17 % . Nike’s current portion monetary value is reasonably valued at $ 42. 09. If a price reduction rate were to be calculated below 11. 17 % so the Nike portions would be under-valued in the current market. but if their price reduction rate were higher than the 11. 17 % Nike portion monetary value would be considered over-valued when compared to the current portion monetary value. When we calculated Nike’s price reduction rate. we

determined that their appropriate WACC should be 9. 26 % . Since this WACC of 9. 26 % is below 11. 17 % . we believe that Nike’s portions are presently under-valued in the market. We believe that Nike’s equity value based on the WACC of 9. 26 % should fall someplace between $ 55. 68 and $ 61. 25. Kiki Ford should urge adding Nike portions to the NorthPoint Large-Cap Fund based on our analysis.

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CASE OVERVIEW

Kimi Ford is a portfolio director at a big mutual-fund direction house called. NorthPoint Group. Ford is sing the add-on of Nike Inc. to the Large-Cap Fund at NorthPoint Group. Nike’s portion monetary value has notably declined since the beginning of the twelvemonth. Her determination whether or non to add Nike to the portfolio should be made by looking at the 2001 financial twelvemonth terminal 10-K study.

In 1997 Nike’s grosss plateaued around $ 9 billion while net income had fallen from around $ 800 million to $ 580 million. Besides. from 1997-2000 Nike’s market portion in U. S. athletic places fell from 48 % to 42 % . Supply-chain issues and the inauspicious consequence of a strong dollar had negatively affected gross in recent old ages. At the June 28. 2001 analyst meeting Nike planned to add both top-line growing and operating public presentation. One end was to develop more mispriced ($ 70- $ 90) athletic places and the other to force its dress line. At this meeting a mark long-run gross growing rate between 8 % -10 % was given and an earnings-growth mark above 15 % .

After reexamining all the analysts' studies about the June 28th meeting Ford still did non hold a clear image of how to value Nike. Ford so performed her ain sensitiveness analysis which revealed Nike was undervalued at price reduction rates below 11. 17 % .

WHAT IS THE WACC?

A steadfast derives its assets by either raising debt or equity or both. There are costs associated with raising capital and WACC is an mean figure used to bespeak the cost of financing a company's plus base. More officially. the leaden mean cost of capital (WACC) is the rate that a company is expected to pay to debt holders and stockholders to finance its assets. Companies raise money from a figure of beginnings so the WACC is the minimal return that a company must gain on bing plus base to fulfill its creditors. proprietors. and other suppliers of capital.

WACC is calculated taking into history the comparative weights of each constituent of the capital construction which means it is the relative norm of each class of capital inside a house. This rate. besides called the price reduction rate. is used in measuring whether a undertaking is executable or non in the net nowadays value (NPV) analysis. or in measuring the value of an plus.

WACC = [Wdebt * Kdebt * (1-t)] + [Wequity * Kequity] + [Wpreferred * Kpreferred]

K = constituent cost of capitalW = weight of each constituent as per centum of entire capitalT = fringy corporate revenue enhancement rate

WHY IS IT IMPORTANT TO ESTIMATE A FIRM’S COST OF CAPITAL?

The cost of capital is an of import issue from the position of direction while taking a fiscal determination. We can name some basic issues related to the importance of WACC and its reading by houses:

* The importance of the WACC is in its relation to the rating ofundertakings. For a undertaking to be executable. non merely profitable. it must bring forth a return higher than the cost of raising debt (Kd) and the cost of raising equity (Ke) . WACC is affected non merely by Re and Rd. but it besides varies with capital construction. Since Rd is normally lower than Re. so the higher the debt degree. the lower the WACC. This partially explains why houses normally prefer publishing debt foremost before they raise more equity. As portion of their hazard direction processes. some companies add a hazard factor to the WACC in order to include a hazard shock absorber in their undertaking rating.

* The cost of capital is besides of import for the direction while taking a determination about capital budgeting. Naturally. the undertaking which gives a higher (satisfactory) return on investing compared to the cost of capital incurred for its funding would be chosen by the direction. Cost of capital is the cardinal factor in make up one’s minding which undertaking to set about out of different chances.

* The cost of capital is important in planing the firm’s capital construction. It will direct the direction about following the most appropriate and economical capital construction for the house which means the direction may seek to

replace the assorted methods of finance to minimise the cost of capital so as to increase the market monetary value and the earning per portion.

* The cost of capital is besides an of import factor for taking a determination about the soundest method of funding for the company whenever the company requires extra finance. The direction may seek to catch the beginning of finance which bears the minimal cost of capital.

* The cost of capital can be used to measure the fiscal public presentation of the top direction by comparing existent profitability's of the undertakings and the projected overall cost of capital and an assessment of the existent cost incurred in raising the needed financess.

Bash WE AGREE WITH JOANNA COHEN'S WACC CALCULATION? WHY OR WHY NOT?

We do non wholly agree with Joanna Cohen's computation of WACC. There are several jobs in her computation ;

* In Cohen's computation. she used the book value for the weights of each capital construction constituent (debt and equity) . Book value of equity should non be used when ciphering cost of capital. Alternatively she should hold calculated the market value of equity. Besides. she should hold discounted the value of long-run debt that appears on the balance sheet to happen the market value of debt (even if the book value of debt is accepted as an estimation of market value) .

* Besides. she should hold considered the preferable stock while ciphering the weights of the constituents of capital construction (the redeemable

preferable stock is comparatively little in Nike’s capital construction so it doesn’t impact the weights) .

* Another job with her computation is about the cost of debt. Cohen used a cost of debt which is even lower than exchequer output. In common sense. a company. even it might be a big AAA house. should be hazardous than US authorities. Cost of debt should be calculated by happening the output to adulthood on 20-year Nike Inc. debt with current voucher rate paid semi-annually alternatively of by taking entire involvement disbursal for 2001 and spliting it by the company’s mean debt balance.

Exploitation SINGLE OR MULTIPLE COSTS OF CAPITAL IS APPROPRIATE FOR NIKE INC. ?

Even Nike Inc. has multiple concern sections such as footwear. dress. athleticss equipment and some non-Nike-branded merchandises (which accounts for comparatively little fraction of grosss) . we assumed Nike Inc. to hold a individual cost of capital since its multiple concern sections are non really different and would see similar hazards and betas.

WHICH EQUITY RISK PREMIUM SHOULD BE USED TO DETERMINE THE COST OF CAPITAL?

For the cost of capital. the geometric mean is a better option to the arithmetic mean. Furthermore. the geometric mean is a more conservative step to utilize compared to the arithmetic mean. The mean market hazard premium has fluctuated by big sums in short clip periods from 1926-1999. 1926-1929 saw high market hazard premiums ; nevertheless. the 1930s and

1970s saw really low market hazard premiums. Therefore. we use the geometric mean since it is a better measuring compared to arithmetic mean when the mensural period is longer and contains more fluctuations.

VALUE OF EQUITY. VALUE OF DEBT AND WEIGHTINGS OF EACH COMPONENT

| Value (in 1000000s $) | Weight| Current Part of Long term Debt| 5. 40| 0. 04 % | Notes Payable| 855. 30| 6. 73 % | Long-run Debt| 416. 72| 3. 28 % | Entire Debt| 1. 277. 42| 10. 05 % | Equity| 11. 427. 44| 89. 95 % | Table 1. The weight of debt and equity in entire capital of Nike

Calculation OF THE COST OF EQUITY UNDER DIFFERENT METHODS AND ADVANTAGES AND DISADVANTAGES OF EACH METHOD

1. Capital Asset Pricing Model (CAPM)

Under CAPM we can happen the cost of equity as ;

Ke = Rf + Betai * Equity Risk Premium

The first issue is to happen an appropriate riskless rate. We think the 20-year outputs on hoarded wealths would be the one because NIKE is assumed to be operated for such long clip. harmonizing to the regenerating scheme proposed by the direction and the long-run debt issued.

Following is to find the beta. The historic betas has been by and large diminishing. and we assume it is the market status and management`s purpose that make NIKE to be a defensive company. Furthermore. we find that the rivals such as K-Swiss and Lacrosse besides have beta less than one. So instead than the mean. we use the YTD beta into computation. On the

other manus. since the beta has been found to be on mean closer to the average value of 1. which is the beta of an average-systematic-risk security. we calculate the adjusted beta. giving two-third weight to the YTD beta and one-third weight to 1.

Sing the hazard premium. we use the geometric mean since it is a better measuring compared to arithmetic mean when the mensural period is longer and contains more fluctuations.

Uniting the above information. we calculate the cost of equity as follows:

Using YTD Beta = & gt ; 5. 74 % + 0. 69*5. 9 % = 9. 81 %Using Adjusted Beta = & gt ; 5. 74 % + [(2/3) *0. 69 + (1/3) *1)] *5. 9 % = 10. 42 %

Advantages:* It provides an economically grounded and comparatively nonsubjective process * It concentrates on the systematic hazard that investors can`t avoid. instead than unsystematic hazard that can be avoided through variegation * It is suited for company that doesn`t wage dividend

* It is widely used.

Disadvantages:* The premises may non be realistic. For illustration. investors may non be all hazard averse and rational that holds efficient portfolio * Investors may concern more than merely market hazard.

2. Dividend Discount Model (DDM)

Under DDM we can happen the cost of equity as ;

Ke = (D1/P0) + gKe = (0. 48*1. 055/42. 09) + 5. 5 % = 6. 70 %

Here we assume NIKE will pay dividend at changeless growing rate of 5. 5 % which forecasted by Value Line. so we use the Gordon growing theoretical account to deduce needed rate of return.

Advantages:* It is simple and widely used* Can be used to deduce implied required rate of return* It is helpful to execute a sensitiveness analysis on the inputs

Disadvantages:* It is non suited for company that doesn`t pay consistent dividends or the dividends are non tied to profitableness * It is suited for merely matured company

3. Net incomes Capitalization Ratio (ECM)

Under ECM we can happen the cost of equity as ;

Ke = E1/P0Ke = 2. 32/42. 09 = 5. 51 %

Advantage:* Simple

Disadvantages:* It assumes the net incomes would be the same in the hereafter. which may non be true * It doesn`t take the growing of company into consideration.

Cost of Equity| | | CAPM| | || Risk-free Rate| 5. 74 % || Equity Risk Premium| 5. 90 % || Year-to-Date Beta| 0. 69|| Adjusted Beta| 0. 79|| Cost of Equity with YTD Beta| 9. 81 % || Cost of Equity with Adjusted Beta| 10. 42 % || | | DDM| | || Current Dividend| 0. 48|| Growth Rate| 5. 50 % || Current Stock Price| 42. 09|| Forecasted Dividend| 0. 5064|| Cost of Equity| 6. 70 % || | | ECM| | || Consensus Earnings Estimate| 2. 32|| Current Stock Price| 42. 09|| Cost of

Equity| 5. 51 % || | | Build-up Method| | || Risk-free Rate| 5. 74 % || Equity Risk Premium| 5. 90 % || Cost of Equity| 11. 64 % | Table 2. Cost of Equity under different methods

WHICH RATE AS RISK FREE RATE IS BEST FOR NOTES PAYABLE AND LONG-TERM DEBT?

For long term debt. the 20-year output on U. S. Treasuries is best as the hazard free rate. Sing the long clip skyline of Nike. a 20-year bond is belongings. And besides. it is comparable to the current 25-year bond which Nike issued 5 old ages ago. Although Nike's current bond is 25 old ages. we could see it as a 20-year bond issued this twelvemonth. and utilize the current monetary value to cipher the 20-year bond YTM.

And for short term debt. because the note payable was a major part in the debt construction. the 1-year exchequers would be preferred as hazard free rate.

Cost OF DEBT CALCULATION FOR NIKE

We could non hold with Cohen's analysis. Because Cohen used a cost of debtwhich is even lower than exchequer output. In common sense. a company. even it might be a big AAA house. should be hazardous than US authorities.

First. Cohen's accent that last twelvemonth. the effectual cost of debt of Nike was less than exchequer output due to its Nipponese Yen notes. However. the rates of debt based on currency alteration are unstable and non-

repeatable. We could reasonable see that Nike’s last year’s low cost of debt is a sort of arbitrage by opportunity.

Second. to cipher the cost of debt. market value of debt should be used instead than the book value used by Cohen. The market value of debt is compounded by the current part of long-run debt. notes collectible. and long-term debt discounted at Nike’s current voucher.

Therefore. we would wish to recalculate the cost of debt. Cost of debt was calculated by utilizing the current liquidated 20-year bond of Nike. Inc. with a 6. 75 % voucher semi-annually. Then we obtain a cost of long term debt earlier revenue enhancement as 7. 17 % . and cost of short term debt earlier revenue enhancement as 5. 02 % .

As shown above in Table 1. short term debt took a important part in Nike’s debt construction ; hence. we use a leaden cost of debt to unite both long term and short term debt effects as in following equation:

Here is the weight of short-run debt. piece is the weight of long-run debt. And both cost of short-run and long-run debt are after revenue enhancement.

Cost of Debt| | | Long Term Debt| | || Coupon Rate| 6. 75 % || Time to Maturity| 40|| Current Stock Price| $ 95. 60|| Cost of Debt| 7. 17 % || After Tax Cost of Debt| 4. 44 % | Short Term Debt| | || 20-year Yield| 5. 74 % || 1-year Yield| 3. 59 % || Risk Premium| 1. 43 % || Tax Rate| 38. 00 % || Cost of Debt| 5. 02 % || After Tax Cost of Debt| 3. 11 % | Final Weighted Cost of Debt After Tax| 0. 36 % | Table 2. Cost of debt

WHAT IS OUR WACC CALCULATION FOR NIKE?

Under different methods. we would obtain different cost of equity. so. decidedly different WACCs which range from 5. 31 % to 10. 83 % . However. no affair which method we use. the stock monetary value of Nike is undervalued presently.

WACC| | || Under CAPM with Adjusted Beta| 9. 73 % || Under CAPM with YTD Beta| 9. 18 % || Under DDM| 6. 39 % || Under ECM| 5. 31 % || Under Build-up Method| 10. 83 % | Table 4. Weighted Average Cost of Capital

As shown in Table 5. the existent implied price reduction rate by current monetary value is 11. 17 % . which is significantly beyond the scope of WACCs we calculated and presented in Table 4. Therefore. in our analysis. Nike’s monetary value would be considered as undervalued.

Discount Rate| Equity Value| 8. 00 % | $ 75. 80| 8. 50 % | 67. 85| 9. 00 % | 61. 25| 9. 50 % | 55. 68| 10. 00 % | 54. 92| 10. 50 % | 46. 81| 11. 00 % | 43. 22| 11. 17 % | 42. 09| 11. 50 % | 40. 07| 12. 00 % | 37. 27| Table 5. Sensitivity trial on WACCs

Recommendation

This graph shows the estimated value provided under different WACCs. and NIKE is presently merchandising at 42. 09 with matching 11. 17 % WACC. So if the deliberate WACC is below 11. 17 % . the estimated value would be higher than the current monetary value and NIKE is undervalued ; if the deliberate WACC is beyond 11. 17 % . the estimated value would be lower than the current monetary value and NIKE is overvalued.

After seting the possible errors that Joanna made. the tabular array shows the deliberate WACC under each method:

Method| WACC| CAPM (Adjusted Beta) | 9. 73 % | CAPM (YTD Beta) | 9. 18 % | DDM| 6. 39 % | ECM| 5. 31 % | Build-up| 10. 83 % |

We can see none of them is above 11. 17 % . bespeaking NIKE is presently undervalued and Ford should add NIKE to the NorthPoint Large-Cap Fund. However. it is of import to maintain supervising the regenerating scheme that the direction offered. since the hereafter market status may hold immense impact on this scheme and hence. predicted future economic income.

NorthPoint Group is a common fund direction house who has the penchant on puting in Fortune 500 companies. such as EXXONMobil. GM. McDonald’s 3M and other large-cap. If we look back to a decennary ago. the fund had performed highly good compared to the market in general (we refer S & A ; P500 to stand for the market) .

Kimi Ford was the portfolio director in NorthPoint Group. who was concerned about whether or non to add Nike. Inc. portions into her fund. Since net income and market portion had been fallen from 1997. a new scheme was proclaimed by the Nike direction squad during the meeting held in June. 2001:

First. extremely priced merchandises are no longer their lone mark. now they would develop the midpriced section so that more clients will be able to afford it.

Second. another manner to hike the gross is to concentrate on its dress line. which they found out to be profitable. Finally. Nike needs to cut down its costs by exercising more attempt on disbursal control. Company executives were optimistic about the long-run gross. anticipating an 8 % ~ 10 % growings and net incomes growing above 15 % .

Analysts had different sentiment about the company prospects ; Lehman Brothers suggested a strong bargain while UBS and CSFB recommended a clasp. Meanwhile. Ford wanted to do her ain prognosis so she developed a price reduction hard currency flow to find that. at a price reduction rate of 12 % . Nike was overvalued at its current monetary value $ 42. 09 and undervalued if the price reduction rate was below 11. 17 % . She asked her helper. Joanna Cohen. to cipher the company’s cost of capital exactly.

On the study. Joanna Cohen used WACC to cipher the cost of capital. where she adopted book values to obtain a proportion of 27 % of debt and 73 % of equity. For cost of debt. she took entire involvement disbursal divided by mean debt balance which resulted lower than exchequer outputs. For cost of equity. she used 20-year Treasury bond as riskless rate and 5. 9 % as market premium. Furthermore. she divided each division by gross. make up one’s minding to utilize one overall WACC. At the terminal. she came to a decision that the cost of capital for Nike. Inc was 8. 4 % .