

Industrial and Financial Economics
Master Thesis No. 2002: 43

**MUTUAL FUNDS AND CORPORATE
STOCK SELECTION**

EMPIRICAL RESEARCH AMONG AUSTRIAN, BRITISH
AND SWEDISH EQUITY FUND MANAGERS

Armand Collins Fotsing Moube
&
Michael Franz Jannach

Graduate Business School

School of Economics and Commercial Laws

Göteborg University

ISSN 1403-851X

Printed by Elanders Novum AB

Abstract

The objective of this study is to identify the stock valuation and selection systems applied by European equity fund managers when selecting ordinary shares. It also includes examining the most significant micro and macroeconomic factors as well as economic indicators when investing in common shares. Additionally we present and review academic principles of corporate stock valuation and selection in order to provide background and tools helpful for prudent investment decision

We conducted a survey among ten European equity fund managers across Austria, Great Britain and Sweden. The results indicate that no single stock valuation method is applied in isolation. The combination of available approaches is the option in use with respect to the fund objective. The most important factors or indicators when selecting ordinary shares are: the firm's financial situation, the shareholder value policy, the business climate index, the firm's expected earnings, the sales development and future demand trends. We also found evidence that qualitative business assessment is essential in corporate stock and firm valuation. Therefore, we argue that more efforts should be directed into this valuation area.

Key words: *Corporate stock selection, corporate stock valuation, equity analysis, equity valuation, corporate stock investment, fund managers and stock analysis, investing in corporate stocks.*

Acknowledgements

First we would like to thank our tutor, Professor Göran Bergendahl, for his academic assistance, and for challenging and helping us to bring our work to a higher academic level. We would also like to thank the management of PENS Investment, which has been a major part of inspiration and a great source of support.

We especially want to thank our respective families for their overall support; this thesis would not have been the same without them. Last but not least we extend our appreciation to those fund managers that have sacrificed their valuable time for interviews and questionnaires. Your time and knowledge have been of high value to us personally and for the completion of this study.

Göteborg, the 8th December 2002

Armand Collins Fotsing Moube

Michael Jannach

Table of Contents

TABLE OF CONTENTS	V
TABLES.....	VIII
FIGURES.....	IX
1 INTRODUCTION	1
1.1 BACKGROUND	1
1.2 PROBLEM DISCUSSION	3
1.3 PURPOSE OF THE STUDY	5
1.4 POTENTIAL CONTRIBUTIONS OF THE STUDY	5
1.5 SCOPE AND LIMITATIONS.....	6
2 DATA AND METHODOLOGY	9
2.1 RESEARCH APPROACH	9
2.2 RESEARCH PROCEDURE	10
2.3 DATA COLLECTION	11
2.3.1 <i>Data Collection Method</i>	11
2.3.2 <i>Data Collection Process</i>	13
2.3.3 <i>Choice of Respondents</i>	15
2.4 RESEARCH EVALUATION	16
2.4.1 <i>Validity</i>	16
2.4.2 <i>Reliability</i>	17
3 INVESTING IN CORPORATE STOCKS	19
3.1 CORPORATE STOCKS.....	19
3.1.1 <i>Equity and Business Funding</i>	20
3.1.2 <i>Corporate Stock Live Cycle</i>	20

3.1.3	<i>The Attractions and Risk of Stock Investment</i>	22
3.1.4	<i>Why Have Shares Performed So Well</i>	24
3.2	ECONOMICS AND MARKET RATIONALITY	25
3.2.1	<i>Stock Market Efficiency</i>	25
3.3	DETERMINANTS OF CORPORATE STOCK RETURNS	28
4	STOCK VALUATION AND ANALYSIS	29
4.1	INVESTMENT STRATEGIES	29
4.2	TECHNICAL ANALYSIS	31
4.2.1	<i>The Dow Theory</i>	31
4.2.2	<i>Charts</i>	32
4.2.3	<i>Trend Analysis</i>	34
4.2.4	<i>Gaps</i>	38
4.2.5	<i>Moving Averages</i>	38
4.2.6	<i>Chart Formations</i>	40
4.2.7	<i>Trend Acknowledgement Formations</i>	41
4.2.8	<i>Other Technical Indicators</i>	43
4.2.9	<i>Mood Indicators</i>	45
4.3	FUNDAMENTAL ANALYSIS	46
4.3.1	<i>Investment Approach, Technique, and Style</i>	47
4.3.2	<i>The Process of Bottom Up Investment</i>	49
4.3.3	<i>Financial Ratios Analysis</i>	51
4.3.4	<i>Business Valuation Models</i>	59
4.3.5	<i>Qualitative Business Valuation</i>	64
4.3.6	<i>Top Down Investment</i>	66
4.4	LITERATURE REVIEW ON CORPORATE STOCK ANALYSIS	70
5	MUTUAL FUNDS	75
5.1	TYPES OF MUTUAL FUNDS	76
5.2	EQUITY FUNDS	77
5.3	EQUITY FUNDS AND MARKET INDEXES	79

5.4	FUND MANAGERS AND BEATING THE MARKET.....	81
5.5	ADVANTAGES AND DISADVANTAGES OF STOCK INVESTMENT CHOICES	82
6	ANALYSIS AND RESULTS.....	85
6.1	STOCK VALUATION AND SELECTION METHOD.....	85
6.1.1	<i>Investment Philosophy.....</i>	87
6.1.2	<i>Time horizon, Investment Strategy and - Approach</i>	89
6.2	FACTORS, INDICATORS AND VALUATION CONCEPTS	91
6.2.1	<i>Financial Ratio Analysis</i>	92
6.2.2	<i>Discounted Cash Flow Analysis</i>	94
6.2.3	<i>Qualitative Business Valuation</i>	95
6.2.4	<i>Analysis of the geographical Region and Sector.....</i>	97
6.2.5	<i>Technical and Mood Indicators.....</i>	98
6.2.6	<i>Other Important Factors</i>	100
7	SUMMARY OF THE FINDINGS AND CONCLUSION	103
7.1	MAIN EMPIRICAL FINDINGS.....	103
7.2	CONCLUSIONS	104
8	RECOMMENDATIONS	107
8.1	CORPORATE STOCK SELECTION	107
8.2	QUALITATIVE BUSINESS VALUATION.....	108
	REFERENCES.....	I
	APPENDIX 1- SEARCH STRINGS.....	VII
	APPENDIX 2 – COVER LETTER TO FUND MANAGERS IN EMAIL.....	VIII
	APPENDIX 3 - STRUCTURED TELEPHONE INTERVIEW OR QUESTIONNAIRE	IX
	APPENDIX 4 – SURVEY RESULTS	XIII
	APPENDIX 5 –CORPORATE STOCK ANALYSIS AS IN THE LITERATURE.....	XVII

Tables

TABLE 4.1: Business valuation models and their prime of application

TABLE 5.1: Advantages & disadvantages of the three basic stock investments

TABLE 6.1: Stock valuation and selection method

TABLE 6.2: Result stock valuation and selection method

TABLE 6.3: Combination of stock valuation and selection method

TABLE 6.4: Most important factors and indicators.

TABLE 6.5: Relative importance multiple comparison analysis and key ratios

TABLE 6.6: Relative importance DCF models

TABLE 6.7: Relative importance qualitative business valuation

TABLE 6.8: Relative importance of geographical region and sector analysis

TABLE 6.9: Relative importance technical indicators

TABLE 6.10: Relative importance mood indicators

TABLE 6.11: Other important factors

Figures

FIGURE 2.1: The research process of the thesis

FIGURE 4.1: Growth and value stock: periods of out performance

FIGURE 4.2: Line chart depicting the S&P 500 index from 1992-02

FIGURE 4.3: Bar chart depicting the S&P 500 index from 1997-02

FIGURE 4.4: Candle stick chart depicting the S&P 500 index 1997-02

FIGURE 4.5: Increasing upper trend line

FIGURE 4.6: Support and resistance level

FIGURE 4.7: Upper and lower trading band

FIGURE 4.8: S&P 500 97-02, with the 38 & 200 days simple moving average

FIGURE 4.9: Chart Coca Cola stock indicating a head and shoulder formation

FIGURE 4.10: Triangle and rectangle formation

FIGURE 4.11: Timing indicator: buying and selling signals

FIGURE 4.12: Overview concepts of stock valuation and selection

FIGURE 6.1: Results stock valuation and selection method

FIGURE 6.2: Investment philosophy

FIGURE 6.3: Time horizon, investment technique and investment approach

FIGURE 6.4: Investment time horizon

FIGURE 8.1: Corporate Stock Selection Approach

1 INTRODUCTION

This chapter presents our motivation for choosing mutual funds and corporate stock selection as our area of interest; this is presented under the background. Next, the focus is directed towards the problem under consideration and the specification of the purpose of our study. The chapter ends up with details on scope and limitations as well as the potential contributions of the study.

1.1 Background

The importance of the corporate stock market has generally increased during the last decades.¹ Many individuals invest large amounts into this type of financial market generally driven by the fact that over long time spans, corporate stocks have outperformed other investments by enormous margins, though one characteristic of the stock market is that it can fall as well as rise significantly in the short and middle term. The current bear market and a lot of other market falls have been painful to many investors who were unprepared for the possibility of such drops. However these falls have changed the attitude of many investors towards alternative stock investment instruments. One of these investment alternatives is the mutual fund.

According to some business analysts, a mutual fund is one of the most profitable securities investment alternatives. They seem cost efficient and easy to invest in. Moreover, they appear to be easy to purchase, buy back, and are expected to be less risky than individual stocks. Anybody, no matter their age or income can invest in mutual funds on the premise that they present an easy and inexpensive way for an individual to capture the money that is to be made from stocks and bonds, without buying them directly.

By pooling money together, individual investors can purchase stocks or bonds with lower trading costsⁱ than if they tried to do it on their own. Yet the biggest

¹ K. Spremann (2002), 'Finanzanalyse & Unternehmensbewertung', 2nd Ed IMF Oldenbourg Wien, p.75

ⁱ A person or organization that trades large enough quantities of shares qualifies for preferential treatment and lower commissions. <http://www.wileyurope.com/cda/cover/0,,0471393150|excerpt,00.pdf>, 25.11.02

advantage to mutual funds is diversification.ⁱ They are set up to buy many stocks, diversifying them in a predetermined category of investments (i.e.- growth companies, low-grade corporate bonds, international small companies).²

Moreover, because of the professional management offered by the fund, one does not need to know everything about investing. The major responsibility of the potential investor is merely to choose a fund whose investment objective and risk level are suitable for them. The rest is the fund manager's task, to invest the pool of money in order to achieve the fund's specific objective. Based on the growing interest in mutual funds as an investment alternative in the last years, the volume of actively traded funds has increased in line with the demand.²

Of course this does not stand without any drawbacks. There is a fee to be paid for the professional management carried out by the fund manager no matter whether the fund performs badly or well and additional fees for other related services offered by the fund company. In addition, mutual funds are set up in a way that they pursue preset objectives to which the potential shareholder has to comply.

But, the bottom line is that on average, the S&P, DOW JONES and NASDAQ indexes that measure the performance of stocks, will nearly always, rise in the long term, so too or better will active managed funds perform.ⁱⁱ In an appreciating market, when the market index is rising a well diversified portfolio will track the index up. The reverse holds for a depreciating market situation. Therefore selecting "the right" stocks becomes more and more significant in order to prevent a severe decline in the portfolio with the depreciation of the overall market. The main task of an equity fund manager is

ⁱ Mutual funds are composed of a diversified portfolio, according to investment style, geographical region, market segments etc.

² [http: www.mutualfunds.about.com](http://www.mutualfunds.about.com), 20.10.02

ⁱⁱ The premise is that active managed funds can perform better than their relevant benchmark index

to invest the money collected from customers in profitable stocks in pursuit of the fund's specific objective.

1.2 Problem Discussion

Before planning an investigation, the researcher first recognizes a question or a problem to be studied. Although questions need not always to be derived from a theory, theories often guide researchers in predicting events or outcomes of research, which ultimately support or deny the explanation. In order to move our science beyond observation, we need to state our underlying problem in a proper manner. A central idea with active managed funds is that they ought to be efficient, and should perform better than market indexes by reason of professional management. Of course this idea is very much supported by mutual funds advocates.

Though we recognize the advantage of this investment alternative in terms of diversification, expert management, liquidity and maybe straightforwardness, we would like to keep in mind that the potential mutual fund investor will also bear several costs associated with the services offered by the fund. The premise that professional investment managers are likely to outperform their respective benchmark index has induced us to look at the methods and concepts used or applied by these investment managers.

We basically summarize these as systemsⁱ of corporate stock valuation and selection. The literature on stock selection distinguishes mainly two attitudes within the frame of corporate stock analysis namely fundamental and technical analysis. On the one hand, the fundamentalist is the one who tries to assess the basic value of the stock. He or she will come up with an intrinsic value to be compared with the market price of the targeted stock. If the market price were below the intrinsic value, the fundamentalist would buy the stock. If not, the

ⁱ Systems of corporate stock valuation include the investment philosophy, the stock valuation and selection method and concept, and the investment strategy

fundamentalist would either sell the stock he already owned or wait for a better deal.

On the other hand the trading decision of a technical analyst is solely based on his or her expectation about future stock price based on past stock prices and trading volumes. Given these divergent views on ordinary share concepts, we structure this study on mutual funds and stock valuation to provide answers the following research questions:

(1) Which are the major systems of corporate stock valuation and selection according to academic theory?

This research issue covers an extensive presentation and evaluation of the major concepts of corporate stock analysis as presented in the theoretical literature. This is fundamental in order to provide a theoretical foundation for the analysis.

(2) Which of these systems do fund managers apply when selecting ordinary shares, and how do they apply the particular corporate stock valuation and selection systems?

The research questions drive us into the relationship between fund managers and corporate stocks selection decisions. In other words, we intend to investigate from our survey sample to which extend they use the presented concepts to support their buy, hold or sell decision. In addition to the identification of these methods, we intend to look at the rationale behind the particular choice.

(3) Which are the most important market indicators, micro-macroeconomic factors considered when valuing and selecting ordinary stocks?

A previous study on Finnish mutual fund managers by Kjellman and Granlund (1998) concludes that the firm's *growth potential; management competence, expected P/E ratio* and *expected profit* are the most important factors considered by fund managers before investing in an ordinary company's stock.

In fact, going through the literature pertaining to the area of corporate stock valuation, reveals that whether technical analysts or fundamentalists, there will always be key factors or indicators to look at in order to estimate the value of an ordinary stock. Which are those factors and indicators according to our survey sample, and can these factors vary in relation to market sector and business cycle?

1.3 Purpose of the Study

As the problem discussion outlines, this study has three main objectives: (1) To describe and review the major concepts and principles of corporate stock analysis with the aim to provide a background and tools to make prudent investment decisions. (2) To identify the valuation and selection systems applied by European equity fund managers. This objective includes exploring the rationale behind their choice as well as the relative importance and practical application of their valuation and selection systems.

Finally (3), we will examine the most significant micro-macroeconomic factors and indicators when selecting an ordinary stock. This incorporates the examination of the relative importance of the valuation concept that particular factors and indicators belong to. After fulfilling our stated purposes the last step is to come up with a model on corporate stock selection model bringing the understanding from the literature study and the empirical survey together.

1.4 Potential Contributions of the Study

As the title of the study states we investigate the area of fund managers and corporate stock analysis. So far there have not been many studies conducted in this area. A previous study on Finnish market identified the most important factors and methods when a Finish fund manager is selecting an ordinary share.

This study goes several steps ahead; it considers (1) a review of the major theories in the field of corporate stock analysis, and investigates (2) how fund

managers apply these particular systems. (3) Moreover this research examines the relative importance of the valuation concepts that particular factors and indicators belong to. Finally we attempt to design a model supported theoretical and empirical knowledge.

Since we regard fund managers as competent institutional investors,ⁱ another major contribution of the thesis will be to provide practical and consistent principles and guidelines of corporate stock valuation and selection. An additional contribution of this empirical research is to identify factors and indicators that an investor should focus on when investing in European ordinary stocks. Moreover, the findings of this study could be used as input for further research, for example for developing concepts of stock valuation and selection to be tested on other kinds of institutional investors, or mutual funds from other countries. So far taking time and personnel constraints into account, the developed principles and guidelines could be applicable by any kind of stock market investor. On the whole, this thesis intends to make a valid contribution to the advancement of knowledge in the area of corporate stock analysis.

1.5 Scope and Limitations

As stated before, the major objective of our thesis is to find out the “best” individual or combinations of corporate stock valuation and selection systems used by fund managers. This study does not establish any link between the performance of the fund and the stock selection process. We argue that it is difficult to determine whether superior performance is due to skills, luck or both.ⁱⁱ So far this study does not identify or explore issues of portfolio management, for example whether the selected stock fits into a specific

ⁱ Institutional investor: A person or organization that trades large enough quantities of shares that the trades qualify for preferential treatment & lower commissions. They enjoy fewer protective regulations, are usually more knowledgeable & better able to protect themselves from risk, <http://www.wileyurope.com/cda/cover/0,,0471393150|excerpt.00.pdf>, 25.11.02

ⁱⁱ A study carried out by Lipper Analytical Services Inc on 24 top equity funds from 1976 to 1996 with a time frame of 20 years, dividing the 20 years period into two decades, revealed that mutual funds with the best records over one decade have a definite tendency to gravitate gradually back down to mediocrity over the next decade

portfolio or how one should diversify their portfolio in order to reduce the total risk.

Moreover this thesis focuses on equity funds since this type of mutual funds are most specialized in corporate stock investment – consequently other types of mutual funds and their principles are left out of the study. The issue of market timing is from secondary importance, implying that this matter is treated to a limited extend. The study is further limited to Austrian, British and Swedish equity fundⁱ managers. This limitation is mainly due to time, and financial constraints, but also to avoid an excessively heterogeneous survey population. The research is further limited to Austrian, British and Swedish funds, which invest merely in European equity.ⁱⁱ

Since we regard Europe as an integrated economy, we assume some macroeconomic factors, such as unemployment or educational level (among other), as relatively homogenous within Europe, therefore likely insignificant in the case of this research. Hence comparing equity funds that invest in different macro economies would lead to disproportionate heterogeneous results regarding the relative significance of these factors.ⁱⁱⁱ

ⁱ We categorize a British fund manager, as one who is working in Great Britain, no matter where the mutual fund she is working for is registered. The same principle holds for Austrian & Swedish fund managers

ⁱⁱ The underlying firms are located in one (or several) of the EU countries, as well in Norway or Switzerland

ⁱⁱⁱ The assumption regarding the homogeneity of given macroeconomic factors within Europe will be proofed within the scope of the analysis

2 DATA AND METHODOLOGY

This chapter presents first the research approach and procedure applied in order to conduct this study. Next, we discuss the method and process used in order to gather relevant information. The final sections of the chapter discuss the choice of the respondents followed by the validity and reliability of our study.

2.1 Research Approach

The choice of a research methodology depends on several factors including the nature of the research question and the intentions of the author. However for some research problems different research methodologies seem to be equally appropriate. Which research method finally serves best for the research purpose depends on the strengths and weaknesses of each method. Yet this section does not intend to discuss the available methods including their advantages and disadvantages, instead, it focuses on those relevant to the study.

Our research approach consists of a descriptive and explanatory study in coherence with the problems and the objectives specified in the introductory chapter. Since we do not believe that there is a measurable relationship between funds manager's stock selection choices and the theory of corporate stock investment, we presume descriptive and explanatory research approaches will be most appropriate to achieve the stated research objective.

The descriptive approach is primarily used when the researcher is interested in describing the characteristics of a specified problem area. Meanwhile the explanatory approach is mainly used when the researcher wants to establish the relation between a number of variables.³ The description part of our thesis intends to look into and evaluate the literature pertaining to the area of corporate stock investment. Going through the relevant literature will provide our reader with an understanding of the foundation of this study's objective and

³ P. Lekvall and C. Wahlbin, (1993), 'information för marknadsföringsbeslut', 3rd Ed, IHM Förlag, Göteborg

the major issues in this field of study, and at the same time solves the first research question presented earlier. The explanatory part of this research, we will basically consider providing answers to the second and third research issues raised under the problem discussion.

2.2 Research Procedure

This study will be conducted as summarized in figure 2.1.

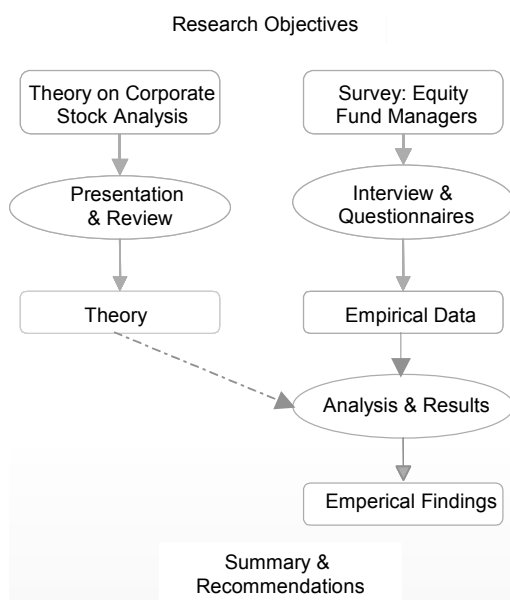


FIGURE 2.1: The research process of the thesis

After having defined the research objectives a more extensive literature study on corporate stock analysis is performed. This part describes and reviews the basic principles and concepts of corporate stock valuation and selection as presented in the theoretical literature. This is necessary in order to provide a theoretical foundation for the later analysis of the empirical results. Simultaneously a survey on Austrian, British and Swedish equity fund managers is carried out. The obtained data are analyzed and the results are judged against the theoretical findings. Through bringing all data together, overall conclusions will then be drawn.

The final step of the thesis is concerned with our recommendations of how corporate stock analysis can be applied; we develop one possible solution; an approach to ordinary share selection:

2.3 Data Collection

This section describes the data collection process applied in this study. As stated in the research approach, this study is descriptive and explanatory including an empirical survey among equity fund managers.

Data Source: There are mainly two sources of data in a scientific research: primary and secondary. Primary data is all kind of new information which the researcher collects his- or herself. In opposite, secondary data is information already gathered by someone else. Due to the nature of our research problems the desired information for the empirical study was not obtainable from secondary sources like databases, textbooks etc.) Therefore we decided to conduct a survey among a sample of equity fund managers.

2.3.1 Data Collection Method

There are a number of different data collection methods at hand. When deciding which method to use, a number of factors have to be considered. Each method has its own advantages and disadvantages. Therefore, it is important to evaluate the different methods and their degree of appropriateness in regard to the research objectives of the study. As mentioned in the previous section, we collected empirical data from primary sources, mainly by conducting a survey among a sample of equity fund managers.

Surveys: Surveys are commonly used for research that is based on either descriptive or explanatory approaches and favors questions such as what, who, where, how many and how much etc. The main advantage of a survey is that it provides an opportunity to explain complex and unstructured issues to the respondents, making sure that they have understood the meaning of the

question. A disadvantage is that surveys are commonly time consuming for the survey population therefore it is sometimes difficult to achieve a high response rate.

Questionnaires and interviews: So far, questionnaire and interview methods are the most common means of data collection in a survey study. Interviews and questionnaires can be structured or semi-structured. Researchers using (semi-) standardized or structured interviews or questionnaires have usually got a good idea of the observable fact the study intends to explore. Structured interviews and questionnaires involve the use of fixed (standardized) questions, batteries of questions, which are presented to respondents in the same way, with no variation in question wording, and with mainly pre-coded response choices. Semi-structured interview and questionnaires include mainly fixed questions but with no, or few, response codes, and are used flexibly to allow the interviewer to probe and to enable respondents to raise other relevant issues not covered by the interview schedule.⁴

Structured questionnaires and interviews: Structured interviews and questionnaires involving preset and standardized answers appear to us well suited for this study. These include questions presented to the respondents in the similar way with no variations in question wording and with pre-coded answers. The strength of this approach is that it enables us to collect data in a clear-cut manner. In addition we decided to assign weights to answers so as to be able to count and use the figures for data analysis. This method is therefore efficient since it leads to simplicity and straightforwardness of information gathering and examination, and reduces biasness in the sample data.

“The strength of structured interviews and questionnaires is the ability to collect unambiguous and easy to count answers which can be arranged to quantitative data for analysis. However, the weakness of structured interviews and questionnaires is that pre-coded response choices may not be sufficiently comprehensive, and not all answers may be easily accommodated”.⁴ In order to

⁴ http://pcpss2.rfc.ucl.ac.uk/mres/handouts/rm_lec8.pdf , 09.09.2002

avoid some of our respondents being forced to choose inappropriate pre-coded answers, a space (other) is given for any relevant response that the respondent thinks appropriate. By so doing we are reducing to its minimum the scope for bias in our data.

2.3.2 Data Collection Process

Interviews: Interviews can be administered in two different ways: face-to-face interviews, and telephone interviews.

Face-to-face interviews: Face-to-face interview methods vary from in-depth, unstructured or semi-structured methods to highly structured, pre-coded response questionnaires, or they can involve a combination of the two. The major advantages of face-to-face interviews are: interviewers can clarify any ambiguities; more complicated and detailed questions can be asked; more information, of greater depth, can be obtained; inconsistencies and misinterpretations can be checked; questions in structured schedules can be asked in a predetermined order; response rates are generally higher with friendly interviewers than for questionnaires which are sent through the post or telephone interviews.⁴ Due to time and financial constraints, we could not arrange for face-to-face interviews with the survey sample.

Structured telephone interviews: Interviews conducted by telephone appeared to us to have equal accuracy rates as face-to-face interviews. In addition, the method is economic in relation to time (i.e. no traveling is involved for the interviewer) and resources (i.e. travelling and associated costs are not incurred). With the help of some the school staff and through the use of the facilities available, we conducted telephone interviews from one of the conference rooms of the Gothenburg University. Fund managers were interviewed according to the structure conceived on the questionnaire (see appendix) so that objectivity and coherence between the telephone interview and the questionnaire is maintained.

Both researchers were asking questions switching over to one another and from time to time. Basically, while asking the questions, the respondents' answers were printed and coded directly by us on the questionnaire sheet. The pre-coded answers facilitated the speed of the interviews (about 35 on average), minimised the interviewer errors when asking questions as well as minimised the errors in recording the answers from the interviewees. Apart from potential sample bias, this method appeared quite appropriate for the study.

Questionnaires: Questionnaires can be administered in the following forms: postal questionnaires and questionnaires by fax or via email.

Postal questionnaires: A common method of covering a large, geographically spread population more economically than interview methods is to mail respondents a questionnaire to complete at home, with a reply paid envelope for its return. Postal questionnaires can be also in the form of fax or emails. Our data collection method involves questionnaire by email and fax. We sent in structured questionnaires to all the contacted equity fund companies. Where we did not succeed to get a telephone interview we invited the fund managers to reply by email or fax.

Our structured questionnaire was completely designed by us and developed on the systems of stock valuation methods used by practitioners when selecting ordinary shares. The questionnaire also captures areas such as important factors and indicators in stock selection, different investment styles, objectives, philosophy and time horizon applied by fund manager among others (see appendix 3). *The questions are identical for the whole sample, whether administered within the frame of a telephone interview or questionnaire.* By so doing we also aimed at avoiding bias in our data because of two different data collection methods. This allowed equal access to information no matter the collection method and provided foundation for objectivity as regards data collection.

2.3.3 Choice of Respondents

As the title of the study states the intention of this thesis is to conduct an empirical research on equity fund managers regarding their choice of corporate stock selection concepts. In comparison to Kjellman and Granlund (1998) who focused merely on Finnish mutual fund managers, this research goes a step forward including equity fund managers from different countries.

Initially we intended to contact equity fund managers from our respective countries of origin (Austria and Cameroon) in addition to Sweden, where we are currently studying. However, since the stock market is quite new in Cameroon, investment institutions such as mutual funds are not yet as developed as in Austria and Sweden. Therefore we decided to focus on Austria and Sweden. In the course of our interviews with Austrian fund companies we got the opportunity to interview three fund managers operating from Great Britain.

The selection criteria: Primarily we gave priority to the largest investment institutions in Austria and Sweden; this is because we consider *the size of a firm* (among other criteria) as an indicator of the firm's aptitude and ability to deal with its underlying business. Our decision choice for equity fund managers is that they basically invest in stocks, which we considered tailored to our research interest. Apart from selecting the right firms, it is also of great importance to select the appropriate interviewee. We decided to focus only on fund managers because we believe they are professional equity dealers and the ones who decide about the stock investment options within the fund company.

Sample size and response rate: In order to gain credibility, it is important that the sample of interviewed firms is representative for the whole population. Yet our intention was to obtain a representative size of equityⁱ fund managers operating mainly in Austria and Sweden. In order to achieve this, we established contacts with investment institutions, giving priority to the largest

ⁱ European equity

ones across the selected countries. We decided to treat all the answers collected in an anonymous way so that a third party could not identify any manager.

By the time we closed the data collection process, a sample of 13 equity fund managers was contacted with four in Sweden, six in Austria and three in Great Britain. We received 10 responses (77%), among which six were from Austria, three from Great Britain and one from Sweden.

2.4 Research Evaluation

There are several sources of mistakes affecting the quality of the study in terms of validity and reliability. In order to achieve a high level of credibility and relevant conclusions, it is important to demonstrate that the research is conducted in such a way that it accurately identifies and describes the studied phenomenon.

2.4.1 Validity

The validity of a measure simply refers to the accuracy of that measure. This study is basically structured to provide practical knowledge of common stock valuation systems applied by investors (equity fund managers) on the stock market. In order to achieve our goal, we have to check that our data corresponds to our purpose. For us, validity is a matter of degree and the business environment is dynamic and likely to change all the time. In order to achieve a high degree of validity, we made plans for interviews with fund managers.

The reason for choosing equity funds is simply because of their involvement in stock investment and equity research. Our decision to survey only equity fund managers as previously mentioned relies on the fact that they are professionals and they are the ones in charge of investment decisions within the fund company. By so doing we intend to achieve a high validity in the area of corporate stock analysis. Our data is therefore collected entirely from the

survey we conducted through telephone interviews and questionnaires sent in to fund managers. The weakness of our questionnaires and interviews might come from the fact that pre-coded responses may not be sufficiently comprehensive, and not all answers may be easily accommodated.

In order to avoid some of our respondents being forced to choose inappropriate pre-coded answers, a space (other) is provided in the questionnaire for any relevant response that, the respondent believes appropriate. However designing questions with pre-coded answers enabled us to collect data in a clear-cut manner and reduced the scope for bias in the data collection. Prudence should be raised regarding general conclusions our limited sample, and about the fact that fund managers could be limited in their activities by the fund's objective.

It should be noted that two of the interviewed Austrians, and two British fund managers respectively, work for the same investment institution. We presume that this will have no significant effect on the validity of our results. Although it is common that investment institutions put restrictionsⁱ on the particular fund manager, corporate stock selection is to a large extent up to the individual fund manager.

2.4.2 Reliability

The reliability of a study looks at the consistency of the outcome of the given study. The reliability of two autonomous studies carried out similarly is established by the results of those studies. Equal or similar results arrived at for example signifies high reliability of the study. That is, continual applications of the operational details under similar conditions yield constant results. Recall that we are dealing with a descriptive and explanatory research approach involving a non-standardised data collection model whereby the structured questionnaire was designed by us.

ⁱ The comments obtained from our survey outline the fact that the restrictions imposed by the fund company have no significant effect on the stock picking style of the individual fund managers

Therefore it is difficult to measure the reliability of this study. In fact, comparable studies could be performed in this area with completely different material in the questionnaires. Regarding questionnaires and interviews, we do not know if the fund managers mood or the prevailing business climate can affect the answers they provide to our questions. In order to avoid the influence of such undesired factors on our sample survey, we rang up fund managers in advance and arranged for the interview when they had free time.

3 INVESTING IN CORPORATE STOCKS

The objective of this chapter is to provide the reader with background understanding in the field of corporate stock investment. We regard it essential to provide the potential equity fund investor with fundamentals in this area. The chapter is basically structured into four sections. Section one provides a definition of corporate stocks, the role of equity in business funding, and the live cycle of equities. The following section highlights the attractions and the risk of equities. Part three explains economics and market rationality as well stock market efficiency. Finally, section four illustrates the determinants of corporate stock returns.

3.1 Corporate Stocks

According to Fontanills and Gentile (2001, p. 2), corporate stocks refer to securities or certificates representing fractional ownership of a company purchased as an investment. How much one owns depends on how many shares of stock he or she possesses versus how many shares have been issued. Also he defines stock market as a catchall name for the overall facilitation and the buying and selling of shares of ownership in companies.⁵ For instance, the total number of Intel's outstanding shares is roughly 3,349,000. If one purchases 100 shares, he or she becomes a fractional owner. Her ownership amounts to 1/33,490,000. As small and insignificant as that might seem, one still has rights as a shareholder.⁵

- Right to profits
- Right to vote
- Right to information

According to Fontanills and Gentile (2001) the most important right shareholders have is the right to share in the company's net profits. In theory,

⁵ G. A. Fontanills, T. Gentile (2001, pp. 2-5), The Stock Market Course, John Wiley & Sons, Ltd

the value of a company is a direct function of the profits that it is able to generate.⁵

3.1.1 Equity and Business Funding

Any company needs funds to buy assets and conduct business. These financial instruments can be obtained from three broad sources: equity, debt (loan finance) and internal through retained earnings, once a business has been generating profits. Issuing ordinary share and attracting others to invest as shareholders and owners of the business can obtain equity. Keasy, Hudson and Littler (1998) regard the chief characteristics of ordinary share capital as follow:⁶

- No interest has to be paid on shares and the shareholders have no legal entitlement to any return on their investment in shares. “Rather, they have rights to what is left, also called the residual claim.”
- Shareholders have no right to take their money out of the business. What they can do is to sell their shares to others – this is with the purpose of listing a company on a stock market.
- Though shares are issued with a face value, though they have no fixed value, they are only worth what others will pay for them.

Hence we conclude that equity is risky, thus referred as “risk capital.”

3.1.2 Corporate Stock Live Cycle

At this point we want to give a short overview of the live cycle of a stock since we regard it as important for an investor to understand which major events their shares might confront. According to Keasy, Hudson and Littler (1998) shares

⁶ K. Keasy, R. Hudson & K. Littler (1998), ‘The intelligent guide to Stock Market Investment’, Wiley Ltd, pp. 52, 64-65

are born when a limited company is formed and as few as two £1 shares may be issued at this point. Since small number investors generally retain these shares, this initial formation of a company is usually of little interest for the public.⁶

New Listing: When a company is brought to a stock market, referred as ‘New Listing’ or ‘Initial Public Offerings’ it is commonly of high interest for the general public. There are a variety of ways by which a company can gain a stock market listing. So far, “Offer for Sale” is the only form of new listing process that gives the private investor a respectable chance of obtaining stocks. Offer for Sale means that a set number of shares at a set price are offered to both private and institutional investors. In this case the shares are under subscribed, and the underwriting investment institution normally takes the surplus. In contrast “Placings” are usually intended for institutional investors. The listing firm hands its shares out to them and the private investor are only able to buy the stocks once they start to be traded.⁶

Merger, Take-Over and De-Merger: The stock market seems to have periods when mergers and take-over are the trend of the day.⁶ However for the investor it is relevant whether mergers and take-over benefit them in the short and long run, and whether they can be predicted. In terms of short-term gains, a large amount of academic evidence for both the US and UK shows that shareholders in target firms earn sizeable positive returns during take-over announcements.

On the other hand, these gains do not appear to be sustained in the long run. Academic evidence found systematic declines in share price in the year following the take-over.⁷ Due to this results Keasy, Hudson and Littler (1998, p. 77) conclude, that it is best to take a short term gain from mergers and take-over at the time of the announcement, and move to other investments.

⁷ M. C. Jensen and R. Ruback (1983), ‘The Market for Corporate Control: The Scientific Evidence’, Journal of Financial Economics, 11, April

Company Failure and Share Suspension: A company failure or share suspension is the worst event that can face a stock investor.⁶ If a company is having severe problems or it is going through a significant re-organization, the directors will normally ask the Stock Exchange to suspend dealings in its shares. The objective for doing this is to protect the owners while the company sorts itself out. However Keasy, Hudson and Littler (1998, p. 79) argue that most companies do not come back from suspension. At the close, we believe the live cycle of corporate stock could be important to understand market movements and shares value fluctuations. We maintain this is an important facet in stock investment decision though it focuses more on market behavior and events surrounding the company.

3.1.3 The Attractions and Risk of Stock Investment

This section is concerned with why individuals should be interested in stock market investment. The argument for shares is that over long time spans, equities have generally outperformed other investments by an enormous margin. Academic evidence shows that one investing \$100 into a portfolio of UK equities at the end of 1929, this investment would have grown to \$197,578 by the end of 1996.

If he had taken a more cautious approach and invested in fixed interest securities issued by the UK government (bonds), which are considered to be a benchmark for secure investments, \$100 would have grown to a mere of \$6,089.⁸ Figure 2.1 depicts the historical development of the Dow Jones Industrial Average from 1945 to 1999. Since this index consists of the most important US companies, it represents the development of the average US stock market.

⁸ The BZW Equity-Gilt Study, 42nd Edition, BZW Securities Limited, January 1997

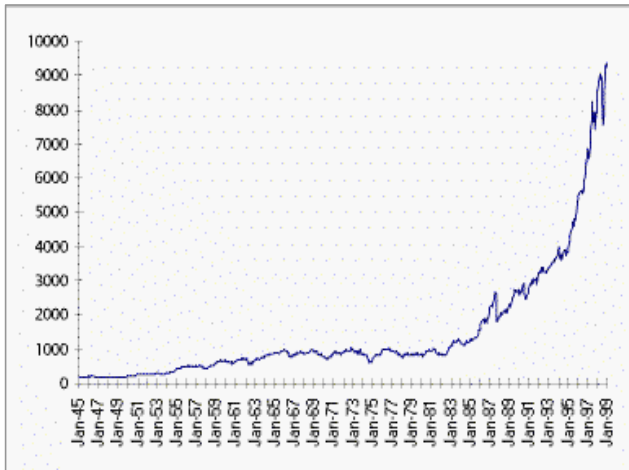


FIGURE 2.2: Dow Jones Industrial Average, 1945 to 99⁹

Moreover Fisher (1912) argued that investment in stocks is superior to bonds during inflationary times. He pointed out that common shares would be expected to under perform bonds during periods of declining prices.¹⁰ Smith (1925, p. 81) blew up this view later. He demonstrated that a diversified portfolio of common stocks would outperform bonds both during inflationary and deflationary periods.¹¹ Smith (1925) argued: “unless we have had extreme misfortune to invest at the very peak of a noteworthy rise, those periods in which the average market value of our holdings remains less than the amount we paid for them are comparatively short duration. Our hazard even in such extreme cases appears to be that of time alone”.

The Risk of Equity Investment: Of course the long-term performance of equity appears quite attractive but one should not disregard the ongoing risk that stock market investment involves. One characteristic of the stock market is that it can fall as well as rise significantly in the short and middle term.

As observed by Keasy, Hudson and Littler (1998, pp. 14-15) on a yearly basis, the total return of the UK stock market has been negative in about a quarter of the years since 1923. The 1929 Wall Street Crash, the 1974 debacle in UK, the

⁹ <http://www.marketvector.com/data/index.htm>

¹⁰ I. Fisher (1912) “How to Invest When Prices are Rising” Scranton, Pa.: Lynn Summer & Co

¹¹ E. L. Smith (1925) “Common Stocks as Long-Term Investments, New York: Macmillan

1987 stock market crash and the decline in Japanese markets in the early 1990s are doubtless the most famous downturns in the history of the stock market. These and a lot of additional market falls have been painful to investors who were unprepared for the possibility of such drops. The following Table illustrates the volatility of a US stock.

Best Worst Case in the USA since 1960	
Time	Volatility
1 year:	-53,4% to 42,8%
5 years:	-7,6% to 28,5%
10 years:	-2,8% to 14,9%

TABLE 3.1: Volatility of US stocks, "Best Worst Case"¹²

3.1.4 Why Have Shares Performed So Well

Keasy, Hudson and Littler (1998, pp. 16-17) argue that the major reason why the stock market has performed so well over the years is that, in the long run, companies gain from the increasing wealth of the national and international economy, and individuals holding equities in businesses share in these gains. Though the common increase in welfare may be relatively invisible in the short run, it becomes very clear when longer time spans are considered. For example if we compare the state of the European economy in 1920 to the present day, it is obvious that the general prosperity is now far higher.

Due to dramatic progress in nearly every field of economics most industries are vastly more productive than they were in 1920.⁶ Equity investors are entitled to a share of company profits and have so directly benefited from this growth. Moreover Keasy, Hudson and Littler (1998, p. 17) find that there is no sign that this economic progress will not go on in the long run and equity investors will continue to profit from this.

¹² J.J. Siegel (1998), 'Stocks for the Long Run: The definitive Guide to Financial Markets Return and Long-Term Investment Strategies', Second Edition, McGraw Hill, New York

3.2 Economics and Market Rationality

The popular view of the stock market is that it can be irrational and driven by a sentiment. Many of the best-known market sayings encapsulate this view; for example, ‘a bull is greed climbing a wall of fear’.⁶ Keasy, Hudson, and Littler (1998, p. 146) argue that if markets are in fact so irrational, a smart investor could stand back and profit from this. “He or she could merely buy stocks when they are irrationally priced at less than their true worth, and sell them again when their true value was recognized.” So far this is exactly what many investment managers try to do. It is assumed by the majority of the general public that it is possible to “outwit” the market in this way. However, a strong body of academic opinions disagrees with the ideas that the market acts in an irrational way and also with the possibility of profitability predicting share prices in a consistent way.⁶

Economics as a subject generally presumes that individuals are rational and act on their own self-interest. However the assumption of rationality seems to go against the experience of many individuals involved in stock market investment. There is, therefore, a potential conflict between the approach, which is predominant among economists, and the observations of many stock market practitioners.

3.2.1 Stock Market Efficiency

“To make money on valuation, one has to assume that markets are inefficient”.¹³ Thus, it seems reasonable to say that those who believe that markets are inefficient should spend their time and resources on valuation whereas those who believe that markets are efficient should take the market price as the best estimate of value.

⁶ Keasy, Hudson and Littler (1998), pp.146-147

¹³ A. Damodaran (2002), ‘Investment Valuation: Tools and Techniques for Determining the Value of Any Asset’, 2nd Ed

The efficient market hypothesis is based on the notion that share prices accurately reflect all available information about both the economy and individual companies. “If the market is efficient, the aggregate market view of a company is reflected in its share price, is the best possible guide to the true underlying value of the business.”¹⁴ Due to this fact no share would be overvalued or undervalued as a result of excessive optimism or pessimism. However, there is a good reason for assuming that there will be a degree of efficiency, since the stock market is extremely competitive. According to Keasy, Hudson, and Littler (1998), it is hard to beat the market because there are many clever investors out, who are trying to do exactly the same.

They argue that if for instance a particular stock selection method could make simple profits, a lot of other investors would run to copy it and the occasion would be arbitrated away. Hence we conclude that the stock market is hypothetically efficient because a lot of individuals are engaged in competitive research, however if the market were efficient it would not be possible to earn excessive returns by outperforming the market. Thus academic theory distinguishes between three forms of the efficient market hypothesis:¹⁵

Weak efficiency: This form presumes that the market is efficient in respect of past share prices, current share prices incorporate all information which can be obtained from past share prices. The inference of this is that it is not possible to make excess profits by trading on patterns, which are revealed from the history of share prices. This implies that technical analysis is ineffective. Academics have used long records of stock market data to test technical trading rules which seek to predict future share price movements from patterns in past share prices. As a result some of the rules, which have been investigated, have shown to be of value in predicting future share price movements.

¹⁴ Ross, Westerfield, Jaffe, (2000), 'Corporate Finance' Fifth Ed, McGraw-Hill International Editions, p. 319

¹⁵ E. Fama (1970), 'Efficient Capital Markets: A review of Theory & Empirical Work' Journal of Finance, 25, p.246-53

Brock, Lakonishok and Lebaron (1992, pp. 1732-64) argue that due to the infinite number of technical trading systems, which have not been subject to detailed analysis in this research, there is a possibility to ‘beat’ the market.¹⁶

Semi-strong efficiency: The semi-strong form assumes that the stock market is efficient in respect of all published information about the company. This implies that it would not be possible to make surplus investment profits from any study or analysis of public information about a business. This would mean that fundamental analysis is ineffective. A number of studies have been undertaken to proof anomalies regarding the semi-strong market efficiency.¹⁶

For instance, academics have analyzed whether investors could profit from taking advantage of new information about companies, purchasing or selling stocks at advantageous times or acquiring stocks with particular characteristics. According to the findings of Foster, Olsen and Shelvin (1984), if the earnings are better than the analysts of the company were expecting, the firm’s stock price tends to move upwards.¹⁶

A number of research activities have been undertaken to see whether the release of information, which may superficially appear to improve the position of the company, but which in fact have no effect on the corporation’s fundamental value, can ‘fool’ the market.¹⁷ However evidence shows that the market can see through such tactics and it is not possible to make superior investment returns by exploiting such kind of announcements.¹⁷ In conclusion, due to lot of observed market anomalies, Keasy, Hudson, and Littler (1998, p. 150) put the evidence regarding the semi-strong markets efficiency into question.

Strong efficiency: The strong form of market efficiency assumes that the market is efficient in respect of all information about a share. In this case, it

¹⁶ W. Brock, J. Lakonishok and J. Lebaron (1992), ‘Simple Technical Trading Rules and the Stochastic Properties of Stock Returns’, *The Journal of Finance*, 47, 5, p.1731-64

¹⁷ G. Foster, C. Olsen and T. Shelvin (1984), ‘Earning Releases, Anomalies, and the Behavior of Security Returns’, *The Accounting Review*, 59, October, p. 574-603

would be not possible to make investment profits, even from information, which is unknown to the public. They conclude, that only the most obsessive supporters of efficient market theory could support the idea that the market has a strong efficiency form. This is in line with the findings of Kretschmer (2002, p. 9) who states that in reality capital markets will be neither strong efficient nor entirely inefficient. He argues that every market will have its particular degree of efficiency, depending on the respective market development. Developed markets are supposed to have a somewhat higher degree of efficiency, since it is even for professional investors impossible to achieve systematically higher yields in comparison to the particular market indices like the US S&P 500 or the DAX. In contrast in less developed markets like in Eastern Europe it is possible to achieve yields through active investment management.¹⁸

3.3 Determinants of Corporate Stock Returns

So far, looking at the determinants of corporate returns we consider the following research question: Which of the following are most important in influencing investment returns?

- The individual stocks one invests in
- Getting in and out of the market at the “right time”
- How one divides their money among stocks, bonds and cash

In his empirical research Siegel (1998) found that portfolio management, or how one allocates money among stocks, bonds and cash has historically accounted for 91.5% of the total investment performance. Market timing and individual security selection, which many investors worry about most, matter far less.¹²

¹⁸ W. Kretschmer (2002), 'Finanzberaterausbildung: Portfoliotheorie', p.9

4 STOCK VALUATION AND ANALYSIS

The objective of this chapter is to explain the basic principles and concepts of corporate stock valuation and selection as described in the theoretical literature. The chapter is organized into four sections. The first section provides a description of different investment strategies. Section two goes through technical analysis whereas section three covers the fundamental analysis. The final section of the chapter provides a review of the presented approaches and discusses the essence of combining these concepts.

In business, any asset whether financial or real, has a value. The key to successfully invest in and handle these assets relies also in understanding not only what the value of the asset as well as the sources of the value.

It was Oscar Wilde who described a cynic as one who “knows the price of everything, but the value of nothing. He could very well have been describing some analysts and many investors, a surprising number of whom subscribe to the ‘bigger fool’ theory of investing, which argues that the value of an asset is irrelevant as long as there is a ‘bigger fool’ around willing to buy the asset from them”ⁱ.

Consequently, perceptions of value have to be backed up by reality, which implies that the price that is paid for any asset should reflect the cash flows it is expected to generate. The objective of equity analysis is also to predict a future stock price. The models of valuation described in this thesis attempt to estimate the value of an ordinary share and relate it to an investment choice.

4.1 Investment Strategies

Investment professionals classify stocks as growth or value, depending on their particular characteristics. Value stocks tend to have slower and more stable earnings growth rates and investors usually pay a lower price for the slower earnings growth.

ⁱ <http://www.cmgww.com/historic/wilde>, Oscar Wilde's Homepage 26.11.2002

Moreover value stocks often have earnings that are more predictable, which generally makes them less volatile.¹⁹ In contrast growth stocks are expected to have a long-term earnings potential that is higher than the market's expectations. Furthermore levels of volatility and investment returns for growth and value change over time. Figure 4.1 exhibits the fact that value and growth styles have outperformed each other at various times intervals.

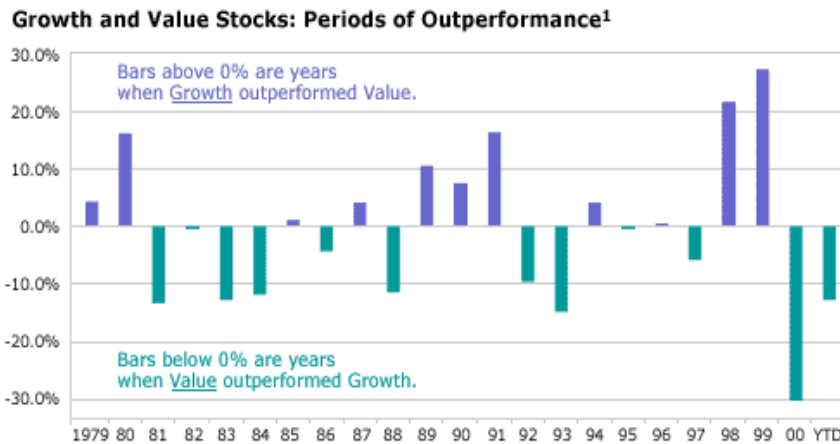


FIGURE 4.1: Growth & Value Stock: Periods of Outperformance: Source Frank Russell Company, 6/30/2001²⁰

Since 1979 there have been 11 years when growth has outperformed value and there have been 12 years when value outperformed growth.²⁰ “It is difficult to predict when the market is going to shift towards favoring the growth or value style. Even professionals have a difficult time spotting the points where the market shifts to favor one strategy over the other”.¹⁹ Investments in growth and the value stocks are called blend-style investments. Some mutual funds have a tendency to favor one style over another. However other mutual funds are designed to be flexible and permit the portfolio manager the autonomy to favor a style given the current market conditions.¹⁹

¹⁹ <http://www.fidelity.com>, 14.11.2002

²⁰ Source of the chart: Frank Russell Company, 6/30/2001, Russell 3000 Index

4.2 Technical Analysis

Technical analysis, also called Chartism, is the practice of forecasting future price movements from the past history of the price and trading volumes. This method of market analysis is based on the premise that knowing where prices have been tells you where prices are going. Analysts rely on the study of the price history itself rather than any underlying economic factors. Technical analysis is therefore frequently contrasted with fundamental analysis, which, in the case of shares, would seek to identify the intrinsic value of a share by looking at the underlying company itself. The rules that technical analysis uses in deciding when to buy or sell shares are either in the form of “patterns” or “computations”.⁶ Technical analysts or chartists as they are sometimes referred to are believed that all relevant information is summarized in the past price samples. These patterns according to Siegel (1998) are likely the result of market psychology or informed traders who accumulate and distribute stock.¹²

4.2.1 The Dow Theory

How can a chart of past stock prices be used to determine a trend? The Dow Theoryⁱ suggests that the movement in the price of a share consists of three levels of trending going on at the same time: (1) daily fluctuations, (2) secondary movements, and (3) primary trends.²¹ According to Dahlquist & Bauer (1999, p. 4) daily fluctuations in stock prices are not of particular importance. Neither are secondary movements, which cover a time period up to one month, except to the extent that they reflect the market’s long term primary trend. The long-term primary trend, which is important, can be either bullish, indicating long-term price appreciation, or bearish, indicating long term price depreciation. Consequently trends continue for a long period. The Dow theory would warn traders not to become confused by secondary downward movements.¹² The chart helps the trader to distinguish between these different types of trends.

ⁱ Charles Dow, cofounder of the Wall Street Journal was one of the founders of the ‘Dow Theory’

²¹ R. Bauer, J. Dahlquist (1999), ‘Technical Market Indicators: Analysis & Performance’, Wiley & Sons Inc.

4.2.2 Charts

A basic component of technical analysis involves chart analysis. A given chart is supposed to capture all the relevant market facts and exhibit them in a consistent design so that the analyst can read all the information that come out of it. The most important thing to keep in mind here according to Kahn (1999, p. 16) is how the market got where it is at any given point in time. For him, how the market moved from a given price say X to another price Y over time reveals a great deal about supply and demand, investor sentiment, and unexpressed price potential.²² A simple explanation provided by Kahn (1999 p. 20) is stated as follows, “knowing if a market is moving up or down helps investors to buy only those issues that have the odds stacked in their favor”. For example, if the trend in prices starts declining, it alerts the investor that it is time to sell the stock.

The bottom line in all markets is that when the demand is greater than the supply, prices will rise. A chart with a positively sloped price line is exhibiting excess demand. It is better to buy a stock when demand is greater than supply than the other way around. Dahlquist and Bauer (1999) assert that the chart of past stock prices could be used to determine the trend. Technical analysts rely on different types of charts in order to visualize movements in stock prices. Schwanfelder (2000, pp. 176-178) distinguishes between the following three main types of charts: line charts, bar charts and candle stick charts and point.²³

Line charts are constructed by simply connecting the daily closing prices. According to Schwanfelder (2000, p. 177) the main advantage of line charts is that they are easy to understand and simple to construct. Figure 4.2 depicts a line chart of the S&P 500 Index.

²² M. N. Kahn (1999) 'Technical Analysis Plain and Simple: Charting the Markets in your Language'

²³ W. Schwanfelder (2000), 'Aktien für Fortgeschrittene: 56 maßgeschneiderte Strategien für Auswahl und Timing', Campus, Frankfurt/New York



FIGURE 4.2: Line chart depicting the S&P 500 INDEX from 1992-02²⁴

Bar charts: According to Schwanfelder (2000, p. 178) these technical analysis tools show the high and low prices for a stock on a given time period. The high and low prices of a given stock are connected with a vertical line. Daily bars sum up trading activities, that is opening and closing prices for a single day. Figure 4.3 depicts a bar chart of the S&P 500 Index from 1997 to 2002.



FIGURE 4.3: Bar chart depicting the S&P 500 INDEX from 1997-2002²⁴

Candlestick charts: According to Dahlquist and Bauer (1999, pp. 7-8) a candlestick chart illustrates four prices for a stock on a given day: the opening price, the closing price, the daily high, and the daily low. The daily high and

²⁴ <http://www.comdirect.de>, 05.11.2002

daily low prices are connected as in the case of bar charts by a vertical line that connects the opening and closing price.

Figure 4.4 depicts a candlestick chart of the S&P 500 Index from 1997 to 2002.



FIGURE 4.4: Candle Stick chart depicting the S&P 500 INDEX 1997-02²⁴

At the close, we can say that charts are tools used by technical analysts to keep track of the market and quickly see when is time to switch from one strategy to another. Of course they do not forecast the future but can help in making buy and sell decisions.

4.2.3 Trend Analysis

The idea behind trend analysis is that once a trend is formed it will continue in that direction until it breaks down. Investors can therefore invest with the current trend until it breaks down. Alternatively, they can wait for the trend to be broken so that they can invest in the direction of the new trend. Kahn (1999, p. 25) acknowledged the fact that knowing the trend is equally as important as avoiding bad trades. As he said, “strategies such as buying the dips work well if the trend is going your way. If it is not, the risk is higher and the potential profit is smaller.”

Trends normally come out of entirely random movement of stock prices very often investors will not invest against a trend they have identified. In this

regard, Martin Zweig²⁵ declared: “I can’t overemphasize the importance of staying with the trend of the market, being in gear with the tape, and not fighting the major movements. Fighting the tape is an open invitation to disaster.

Trend lines: Trends are regularly measured and recognized by trend lines. A trend line helps to identify the trend as well as potential areas of support and resistance. A trend line is a straight line that connects two prominent peaks or troughs in the price action of an underlying tradable. No other price action must penetrate the trend line between the two start points. In this way a trend line marks a support or resistance area where price has turned (peaks and valleys) and has not been violated. The longer a trend line is the more valid the line is, especially if price has touched the line several times without penetration.²⁶

When a longer-term trend line is penetrated it gives indication that a reversal of the trend has a higher probability of occurring with future price action. This is not to say that penetration of a trend line is proof of the future path of prices. As with all indications of a reversal of price trend, there is no foolproof method of predetermining what future prices will be for any tradable.²⁶ Figure 4.5 depicts an increasing upper trend line.

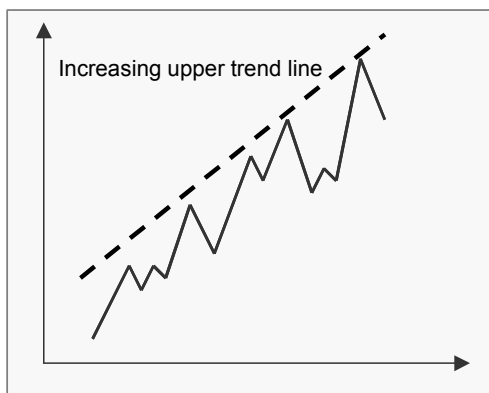


FIGURE 4.5: Increasing upper trend line

²⁵ M. Zweig (1990) "Winning on Wall Street", New York: Warner Books, p.121

²⁶ <http://www.trade10.com/resistance.htm>, 02.12.2002

Support and resistance levels: Kahn (1999, p. 37) defines trend lines as support and resistance lines on an angle. That is, they are flat levels where prices stop declining and going up respectively. Siegel (1998, p. 246) maintains that when prices are rising, the moving average follows the market and forms a support level for stock prices.

Meanwhile, when prices are falling, the moving average is above current prices and forms a resistance level. Resistance levels are the upper band of trading ranges and become more significant the more prices turn against them without penetration. Penetration of a resistance line can imply that the trend will continue in the direction of the penetration as figure 4.6 below exhibits.



FIGURE 4.6: Support and resistance levels²⁶

The longer a trend line drawn at a support or resistance level the more significant it is when penetrated. The more a trend line is validated, whether it be a support level or resistance level, the more significant penetration of the trend line is in determining the future path of prices. Penetration gives indication of a reversal of the price trend.²⁶

However, the numerous buying and selling of stocks trying to win the market involves a lot of transaction costs that might definitely affect the returns of the investor. Within a given trading range, the market can rise, fall or remain

²⁶ <http://www.trade10.com/resistance.htm>, 02.12.2002

constant. If the market reaches the range bottom, the price is said to be low enough to discourage the bears and the bulls from being more aggressive. As stated by Kahn (1999 p. 115) “fitting a trading channel to the market places support and resistance trend lines at levels that correspond to the majority of significant highs and lows.”

Trading bands, also known as envelopes, outline the boundaries of the stock normal trading range. This idea is by supported by Dahlquist and Bauer (1999, p.37) who maintained further that trading bands represent the maximum divergence from the stock price’s moving average, which is considered as the center of the stock price trend. The construction of these boundaries involves drawing two regular lines parallel to the moving average, with one line over he moving average and the other line one under it.

Dahlquist and Bauer (1999, p. 41) maintained that the rationale behind the system is that “overzealous buyers and sellers push the price of a security to extremes (the levels of the bands). The prices then stabilize and move to a more realistic level within the bands. Figure 4.7 depicts the upper and lower trading band.

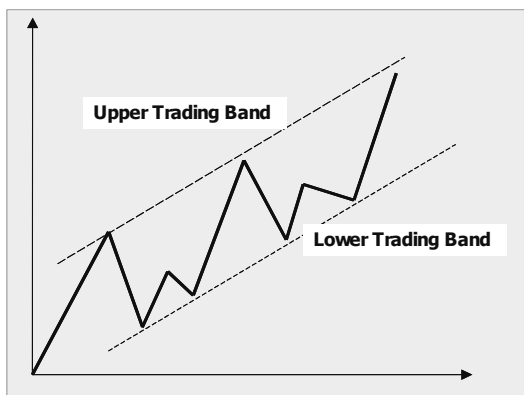


FIGURE 4.7: Upper and lower trading band²³

4.2.4 Gaps

Gaps can be defined as rapid shift in market perceptions due to merger and acquisition threats or news following idealistic projections. The fact that these indicators leave an empty space on the charts gives explanation for its appellation. Kahn (1999, p. 66) defines a gap as a price level where a market does not trade. He maintains that in a rising market, a gap occurs when prices open at a higher level than the previous day's high and do not trade lower to fill the space.

4.2.5 Moving Averages

Technical analysts also focus on identifying when the trend is about to reverse. "A popular tool for determining when the trend might change examines the relation between the current price and moving average of past price movements."²² A moving average could be simply regarded as the arithmetic mean of the past closing prices of a given stock or index over a precise period of time. Because they consider a time interval bigger than one trading day, moving averages are more constant or fluctuate less than daily stock prices. Technical analysts argue that a moving average enables market players to recognize the vital without being disturbed by the day-to-day fluctuations in the market. Different types of moving averages involve:

Simple moving average, this is simply the average of the closing prices of the stock during a given number of periods. The number of periods considered when determining the average may vary from one stock to another or from one commodity to another. Mostly, it is associated with the cycle of the relevant item. According to technical analysts whenever prices stay above the average, there is strength in the market and investors are keen to offer more for the stock so long as the market values it higher. Given that market valuation is based on participants' expectations, the reverse will hold if prices cross and maintain below the average. Figure 4.8 depicts a line chart of the S&P 500 Index from 1997 to 2002, with the 38 days respectively 200 days simple moving average.



FIGURE 4.8: S&P 500 1997-02, with the 38 and 200 days simple MA²⁴

Exponential moving average: exponential moving average assigns weight to data with more weight to recent data and less to older to reduce the lag created in the case of the simple average. This is contrary to the simple moving average approach, which gives equal weights to each daily price. Weighting data in favor of the most recent observation gives more importance to the most recent stock prices in the exponential moving average calculation. This indicator is referred to as exponential average because of its geometric weighting system, which means it reacts faster to price changes as compared to other averages.

MAC-D: The moving average convergence-divergence measures how two moving averages progress together and separately over time. Analysts claim that MAC-D works best in a trending or volatile market meanwhile it can produce faulty results in a flat and quiet market. The underlying principle is that as a market moves higher, the shorter of two moving averages is above the longer.

The reason being that the shorter average reacts faster to price movements. This idea is developed by Kahn (1999) who argued that when the shorter average crosses below the longer, it is a signal that the trend may be reversing.

MAC-D starts with the departure chart and spreads over the surface a moving average of the initial values.

4.2.6 Chart Formations

According to Schwanfelder (2000, p. 191) chart formations are typical chart pattern, which are supposed to allow prognoses concerning the future price development of stocks. In the following subsections, we provide examples of commonly used chart formations.

Head and shoulder, this refers to a reversal chart pattern looking like a head with two shoulders on both sides. Kahn (1999, p. 57) sustained that heads and shoulders demonstrate some technical factors such as failing momentum, support/resistance breaks and trend breaks. According to him, a price in rising market make higher highs and higher lows as the trend goes up. Head & shoulder pattern are measured from the neckline to the top of the head. A neckline is a line connecting the corresponding shoulders of a head and shoulder pattern. This line provides a support for the pattern. See Figure 4.9:

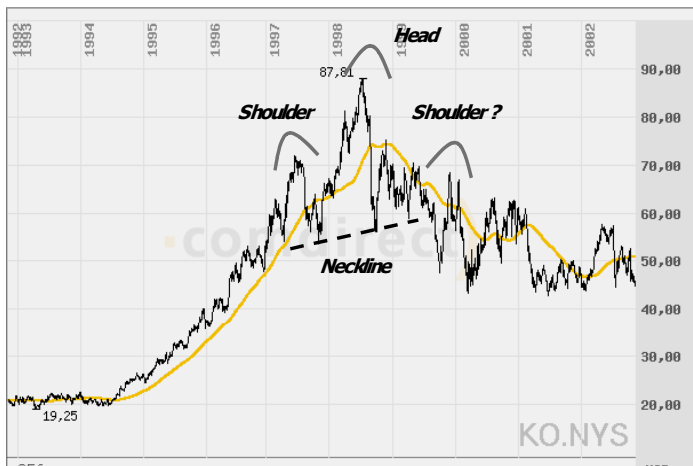


FIGURE 4.9: Development of Coca Cola stock indicating a head & shoulder²⁴

Kahn (1999) suggested that in a simple head and shoulders pattern, the market is supposed to trade down from the top of the right shoulder towards the

neckline. According to him, if the neckline is penetrated, the reversal pattern is completed and the market should move lower. On the other hand, if the neckline support level holds, then the market should maintain higher meaning that the reversal pattern failed to complete.

Double top and double down: Another type of reversal pattern is the double tops or double down or “M” or “W” formations. This “M” or “W” shaped pattern is basically a head and shoulders without head. One important difference with the typical head and shoulders in accordance with Kahn (1999, pp. 60-61) is that “while a head and shoulders is more dramatic, it is also less strict in its definition. The neckline needs not to be horizontal but can be on an angle. The double top and bottom requires that it be based on a true support or resistance level.”

Cup with handle: considering cup with handle, Kahn (1999, pp. 53-56) stated the following: often, a single technical formation incorporates the rules of the other patterns. This illustrates the concept that no single technical signal is good enough to stand by itself. Rather, when several indicators signal concurrently, each is reinforced and the likelihood of a correct trading decision is increased geometrically. One such pattern is called the cup with the handle.” This pattern, which obtains its name from its shape like a coffee cup with a handle on the side, is also often applied to the stock market.

4.2.7 Trend Acknowledgement Formations

Rectangle and triangle: Kahn (1999, pp. 51) defines a rectangle pattern as a section surrounded by a support line on the bottom and a resistance line on the top. The market will normally fluctuate within the ranges established by the top and the bottom lines for a given number of periods. The time period in this case varies in line with the type of chart in use. Rectangles are comparable to support and resistance levels. Technical analysts argue that rectangles like

many other patterns frequently break in the direction of the original trend. On the other hand, Kahn (1999, p. 51) defined a triangle as a prolongation pattern that has converging lines of support and resistance. Triangles are associated with uncertainty about the market, which further involves tension among participants who feel unsecured about any buying, selling or hold decision. This tension will persist until the market breaks out. In Kahn (1999, pp. 52) words an important point to keep in mind when analyzing triangles is “that a breakout is significant if it occurs approximately two-thirds of the way from the left side of the triangle to the apex (the apex is where the two lines would meet if they were extended). If the price action continues to bounce around in the triangle close to the apex, a breakout it less significant and other technical indicators should be used.” Technical analysts generally consider rectangles and triangles as signal of persistence of the trend. However, this doesn’t hold all the time. It is also argued here that the market will frequently break out in the direction of the previous trend. Figure 4.10 depicts a triangle and a rectangle formation.

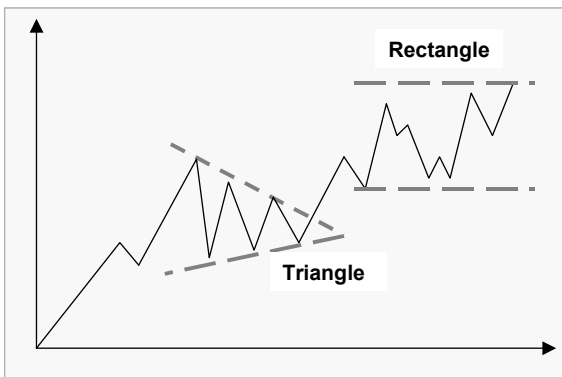


FIGURE 4.10: Triangle and rectangle formation

Flags: This other form of continuation pattern has its name from its shape as a “flag flying on a flagpole.” Kahn (1999, p. 53) declared about this indicator: “when a market is trending higher, it is more common for it to slowly give back some of those gains as the bulls take some profits. Since traders do not all do this at the same time, the market displays a small counter trend move lower as

more of them take their profits. When this is over, the market generally breaks out in the direction of the original trend as the bulls re-take their long positions and new bulls enter the market at the new attractive price level.”

4.2.8 Other Technical Indicators

Advance decline index: According to Schwanfelder (2000, pp. 203-204) the advance-decline index (AD-line) is obtained from the relationship between price-gaining and price-losing shares. Hereby the difference between those stocks, which exhibit a price increase and those that show a price decrease is daily, calculated. The obtained divergence is then added; in case number of gainers is higher, respectively subtracted in the reverse case to that of the particular value of the previous day. Calculating these differences over a giving time span and connecting them result to an advance-decline-line.

A decreasing AD-line signals that the amount of price gaining shares declines; an appreciating line indicates that the number of price gaining shares enhances. Note, is the AD-line moving parallel to the index, it acknowledge an up or downward trend respectively. However if the index is increasing while the advance-decline line is already declining, one must be careful because the rate increase ‘loses’ its strength since it is supported by fewer shares.²³

Relative strength index “RSI”: This is a very admired momentum indicator. As revealed by Kahn (1999, pp. 83-86) “momentum in markets is like momentum in physics. Markets in motion tend to stay in motion and markets at rest tend to stay at rest unless acted upon by an outside force. Two terms that are usually associated with momentum which are overbought and oversold...what they really mean is that the market has moved too far too fast.” The RS index measures the speed of price movements given that stock prices fluctuate very often. “The slope and values of the relative strength index are proportional to the velocity and magnitude of the price move and are very

²³ W. Schwanfelder (2000), ‘Aktien für Fortgeschrittene: 56 maßgeschneiderte Strategien für Auswahl und Timing’, Campus, Frankfurt/New York

helpful in identifying overbought and oversold situations,” said Kahn (1999, pp. 83-86).

The typical RSI value varies from 0 to 100, and a value above 75 indicates a potential overbought meanwhile a value below 25 indicates a potential oversold position.

According to Kahn (1999, p. 200): “the core of the formula for RSI takes the last `n` periods and divides the gross positive changes per period by the gross negative changes. This means that the more often prices move higher in that `n` period span and the greater those changes become, the higher the RSI value. RSI filters out normal volatility difference between markets while maintaining the significance of single large price moves. By reducing the number of periods in the calculation RSI can be made more sensitive.”

Stochastic indicator: Another type of momentum indicator is the stochastic indicator developed by George Lane. This is a helpful instrument for recognizing near- term tops and bottoms in order to time trades nearer to local reversal points. The stochastic indicator according to Kahn (1999, p. 201): “measures the placement of a current price within a recent trading range under the theory that as a market rises, close prices tend to occur nearer to the high end of their recent range. When prices trend higher and closes begin to sag within the range, it signals internal market weakness.” The stochastic indicator involves using two lines referred to as the K and D lines.

These two lines are useful for the overbought and oversold analysis as in the case of RSI. Simply stated by Kahn (1999, p. 202): “ the RSI yields the most meaningful results in trending markets while Stochastic works best in flat or choppy markets. While the goal of each is similar, they need to be used in different market situations.” That is, the RSI is appropriate when price has moved too far too fast (trending market), while stochastic is appropriate when

the given price has shifted to the top or to the base of the trending range (flat market).

Timing indicator: The objective of the timing indicator is to point out ‘overbought’ or ‘oversold’ situations and provides market-timing signals.²³ The timing-line fluctuates within a particular band wide. Upward breakouts are a selling signal, whereas downward breakouts are a buying signal. Figure 4.11 depicts the Timing Indicator: Buying and Selling Signals.

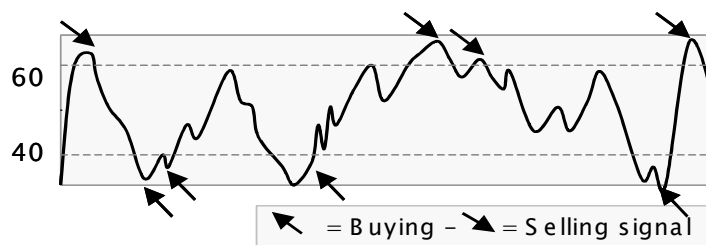


FIGURE 4.11: Timing Indicator: Buying and Selling Signals²³

4.2.9 Mood Indicators

“**Mood indicators** show a trend”. As mentioned in earlier chapters the stock market development is driven by the aggregate (re-) actions of individuals, based on their persuasions and expectations. According to Schwanfelder (2000, p. 171) reactions are not independent from particular moods. He argues that in the past a couple of analysts, investment gurus and stock market predictors have significantly influenced stock prices by publicizing with their mood and opinion respectively. Mood indicators are based on this thought. They evolve from inquires of particular individuals, for example investment managers, analysts or investment advisors.²³

Business climate index: According to Schwanfelder (2000, p. 174) the business climate index expresses the expected business situation ('good' / 'satisfactory' / 'poor') and business expectations for the next six months ('better'

²³ Schwanfelder (2000), p. 206

/'same' / 'worse') taken from a representative sample of companies. The replies are weighted according to the importance of the industry and aggregated. The percentage shares of the positive and negative responses to both questions are balanced, and a geometric mean is formed from the balances. The series of balances thus derived are linked to a base year (currently 1991) and seasonally adjusted. The Ifoⁱ Business Climate balances can fluctuate between extreme values of -100 (i.e., all responding firms appraise their situation as poor or expect business to become worse) and +100 (i.e., all responding firms assessed their situation as good or expect an improvement in their business).²⁷

The Ifo/ICC World Economic Survey (WES) investigates world wide economic trends by polling economic experts from multinational corporations and international organizations. Examples are the economic climate for North America, Europe or Asia.

Put-call ratio: The put-call ratio is the relationship between put and calls. People that take the bet that the market will drop will hedge their position by buying puts, controversially investors that believe that the market will appreciate, will buy calls. According to Schwanfelder (2000, p. 175) the put-call ratio is a very important mood indicator since the market participants set in their money by betting on the market development. Hence when a majority of the market participants believe that prices will fall, and consequently not investing further, will make the market really fall.²³

4.3 Fundamental Analysis

Fundamental analysis is the study of the underlying business of the firm in which the investor is considering investing. The important thing is to understand the underlying company and not focus on the share price in isolation.⁶ Fundamental analysis determines the value of the investment. This

ⁱ Ifo Institute for Economic Research, <http://www.cesifo.de>, 26.11.2002

²⁷ http://www.ifo.de/pls/ifo_app/CESifoSwitch?setPage=/pls/ifo_app/gsk_public_page_e.show, 25.11.2002

⁶ Keasy, Hudson and Littler (1998), p. 9

value is weighted against the price of investing. For the outside investor the price of the investing is the market price of the traded stock. If the determined value is greater than the market price, the analyst recommends to buy the share, if less, to sell it. If the warranted value equals the market price, the analyst concludes that the market in the particular investment is efficient. In the analyst's jargon this is a hold.²⁸

4.3.1 Investment Approach, Technique, and Style

Investment approaches: Keasy, Hudson, and Littler (1998, pp. 187-199) distinguish between Top Down and Bottom Up investment approaches. The objective of top down investment is to identify large social, technological, political and economical trends, and then invest accordingly. For example, in the not too distant past, investors may have decided that the Far Eastern economies were a good investment because of their high economic growth rates.⁶

Top Down investment is based on a broad assessment of whole economies and industries, with this approach; the detailed analysis of particular companies is of secondary importance.⁶ In contrast Bottom Up investors work into the opposite direction. "They look for the 'best' companies and are little concerned about whether they fit into some "great patterns."

The objective of the Bottom approach is to identify successful companies, and then invest accordingly.⁶

Investment techniques: In addition to the distinction made above, academics differentiate between Value - and Growth Investment Technique.⁶ A value investor calculates the fundamental value of an investment and compares that with the current price the market offers for it. If the price is lower than the value by a sufficient margin then the investor buys the security.²⁹ Keasy,

²⁸ S.H. Penman (2001), 'Financial Statement Analysis and Security Valuation', McGraw-Hill International Edition 2001, Finance Series, pp. 8-17

²⁹ B. C. N. Greenwald, J. Kahn, P. D. Sonkin, M. van Biema, (2002) 'Value Investing: From Graham to Buffett and Beyond', Wiley Ltd, pp. 12-15

Hudson and Littler (1998, pp. 200-205) argue that at the simplest level Value Investment is concerned with quantitative techniques to identify under-priced shares. The application of financial measures and ratios to the most recent accounts of companies is supposed to reveal which ones the market undervalues.

“To the strict value investor, the merits of the company and future cash flow generation are seemingly irrelevant.”⁶

In contrast to value investment, traditionally defined growth investment is concerned with recognizing those businesses with potential earnings that will increase above that of the general market.⁶ In the process of starting to look for growth stocks Keasy, Hudson and Littler (1998, p. 205) suggest that the first one should do is to find growth sectors, and the method of top down investment can be applied here.:

Having identified the growth sector the next step is to satisfactorily understand the investment target. They regard this step as very important since not all firms in a growth sector will exhibit growth! According to academics there are different types of growth stocks. First, there is the real growth stock such as Coca Cola. This company has a unique product, and continues to be successfully marketed. These are rare. A more common type of growth stock is one, which exhibits a long period of growth, often on the back of a technological step forward, but where the growth comes eventually to and end.⁶

In addition Keasy, Hudson and Littler (1998, p. 207) distinguish between two further types of growth stocks, cyclical and turnarounds (recovering stocks). Cyclical stocks are equities that show strong growth and decline across the up and down phases of the cycle respectively. In contrast to real growth stocks that can be bought at nearly any time, cyclical stocks need a great deal of timing both in entry and exit.⁶

Investment styles and Fundamental Analysis: Penman (2001, pp. 3-7) defines investment style as the different attempts investors make in order to identify the real worth of a stock. He distinguishes between several groups of investors. First the ‘intuitive investor’ is one who relies on his instincts and goes for hunches. Second the ‘stock screener’, who trades on a rule of thumb, for example he buys stocks with low P/E ratios. Third there is the ‘passive investor’ who merely ‘throws up his hand’ and trusts market efficiency. According to Penman (2001, pp. 3-7) these investment styles are simple and do not require much effort, but all three types of investors run risks beyond those inherent in the firms they buy. In contrast the fourth type, the ‘fundamental investor’ reduces this risk by examining information about the firm and reaching conclusions about the underlying value the information implies.

4.3.2 The Process of Bottom Up Investment

A current approach to business analysis developed by Moon and Bates (1993, pp. 139-52) can be summarized as follows. This approach is also referred as CORE-approach.³⁰

- Context: External and Internal Profile
- Overview
- Ratios Analysis
- Evaluation

Context: In order to understand the corporation’s performance it is essential to understand its context both externally and internally. For instance, economic forces do not affect different sectors equally. Exchange rate movements will have a greater impact on manufacturers of exports than home market retailers. Therefore it is important to understand how far the particular sector may be

³⁰ P. Moon and K. Bastes (1993), ‘CORE Analysis in Strategic Performance Appraisal’, Management Accounting Research, 4, pp. 139-52.

affected by major sources of external change. In addition to that different activities in particular sectors are likely to result in unlike financial profiles.⁶

Like the sectors, individual companies have histories and characteristics. In order to understand the internal profile of a corporation, one has to understand how the financial profile of a company has changed and how it is likely to change. It is essential to analyze the features, the key events as well as the physical activities of business.⁶ This is in line with Penman (2001, p. 12) who states that “One must not buy a stock, one must buy a business” that is, make sure you aware of any business you want to deal with. An analyst seeking to value a telecommunication firm must understand the industry and the firm’s position in it. He must know the firm’s strategy to meet the challenges of the competitors, he must know the products, and he must anticipate consumer demand and so on. To understand whether a P/E ratio of 76 for Dell Computers is too high, the analyst must understand the computer business, the prospects for sales growth, and the profit margins on different computer products.²⁸

Overview of the Financial Statements and other sources of information: With background knowledge of business, the valuation begins with an analysis of information about the business. Commonly there are many forms and sources of information. “There is typically a vast amount of information, from ‘hard’ dollar numbers in the financial statements like sales, cash flows, and earnings, to ‘soft qualitative information on technological change, quality of management or consumer taste.”²⁸ Penman (2001, p. 12) groups information into information from financial statements and information outside of financial statements.

The analyst’s job is to present a position that is supported by financial and non-financial information.³¹ The key is to extract the relevant data needed for forecasting.²⁸ The process of extracting information from financial statements

²⁸ S.H. Penman (2001), ‘Financial Statement Analysis & Security Valuation’, p.12

³¹ J. English (2002), ‘Applied Equity Analysis: Stock Valuation Techniques for Wall Street Professionals’, McGraw-Hill

is called Financial Statement Analysis. So far, overview means to recognize what is different or special in the corporation's financial profile compared to 'the normal state of affairs' and its close competitors.⁶ The first kind of financial statement is the annual report. Professionals and economic writers suggest that it is worthwhile to analyze it. When analyzing a company's balance sheet one should keep in mind that this kind of financial statement is usually based on historic notions of value. For example if a company has written down a machine through four years of depreciation, in the balance sheet it would have zero book value but still doing a good service for the company; in other words, it has value.⁶ In contrast to the balance sheet, which takes a snapshot of a business at a single point in time, the income statement reports how well the company has been trading over the previous year.

In analyzing the income statement Keasy, Hudson, and Littler (1998, p. 106) suggest to look on particular issues. For example how well is the company managing its gross margin? The gross margin reflects a firm's price policy, product mix and control of the direct cost base. This should be compared over time and to the margin achieved by competitors. In contrast to earnings that can be manipulated by accountants cash flows are more stable. To be summarized the cash flow statement shows whether the company is generating or absorbing cash from its activities.

4.3.3 Financial Ratios Analysis

“The preparation and presentation of financial ratios is obligate when valuing a business disregarding the clarity of these figures.”¹ According to Penman (2001, p. 40) the method of key ratio analysis works as follows:

- Formation of a peer group of comparable firms that have similar operations

⁶ Keasy, Hudson and Littler (1998), pp. 104-105

-
- Identification of measures for the comparable firms in their financial statements – earnings, book value, sales, cash flow – and calculate the most important key ratiosⁱ
 - Apply these ratios to the corresponding measures for the target firm in order to get the comparative based business value

Keasy, Hudson and Littler (1998, p. 112) consider the following issue as important for general financial statement analysis. Note that a business is a multidimensional entity, and it is not possible to draw conclusions from one single financial item in isolation. For instance, if the debt funding of a company has increased markedly, this may or may not be negative. If for example the debt has risen because the firm has discovered a profitable business opportunity to raise its fixed assets, then this is positive rather than negative.

Though comparison analysis is easy it has also its drawbacks. The analysis is not anchored in something fundamental that identifies the value independency of prices. Penman (2001, p.41) argues that multiple comparison analysis assumes that the market is efficient setting the price for the comparables. Hence if the market is mispricing the comparable firms the estimate will be mispriced also. These conceptual problems aside, the method of multiple comparison analysis also has problems in implementation.

Penman (2001, pp. 43-44) lists the following disadvantages of key ratios: Firstly identifying comparable firms with the same characteristics is difficult. Moreover the more comparable ratios there are the less homogenous they are likely to be. Secondly different figures give different valuations and finally a negative denominator can occur when a firm has a loss the P/E ratio gives a negative price, for example. However key ratios have the advantage that they generally need less information than the DCF, for example. They also show

ⁱ Also financial ratios, or key figures

very easily whether particular market segments are over or undervalued.³² There are different approaches of categorizing key ratios. Keasy, Hudson and Littler (1998, pp. 104-107) classify these figures according to the type of underlying financial statement into:

- Balance sheet ratios
- Income statement ratios
- Cash flow ratios
- Market ratios

According to Ross, Westerfield and Jaffe (2000, p. 31) data from financial ratios provide information about five areas of financial performance:

- Short term solvency
- Activity
- Financial leverage
- Profitability
- Value-the market value of the firm

Short-term solvency: Ratios of short-term solvency measure the ability of the firm to meet its short run obligations. According to Ross, Westerfield and Jaffe (2000, p. 31) the most widely used measures of accounting liquidity are the current ratio and the quick ratio.

³² K. Kotzegger, 'Individuelles Vermögensmanagement: Management von Aktienportefeuilles', Finanzberaterausbildung, Part 3: Fundamentale Analyse und Aktienbewertung

$$\text{Current Ratio} = \frac{\text{Total Current Assets}}{\text{Total Current Liabilities}} \quad (1)$$

$$\text{Quick Ratio} = \frac{\text{Total Current Assets} - \text{Stock}}{\text{Total Current Liabilities}} \quad (2)$$

Activity: Multiples of activity is constructed to measure how effectively the firm controls its investment in assets. Considering the fixed assets Keasy, Hudson and Littler (1998, p. 113) recommend that one should ask whether the investment in these assets and its make up is similar to those of the close competitors. Moreover analysts should look how these assets are valued and if they are generating sufficient sales and profits. One widely used multiple to quantify how effectively assets are used to generate sales is total asset turnover.¹⁴

$$\text{Total Asset Turnover} = \frac{\text{Total Operating Revenues}}{\text{Total Assets}} \quad (3)$$

$$\text{Fixed Asset Intensity} = \frac{\text{Fixed Assets}}{\text{Total Assets}} \quad (4)$$

$$\text{Fixed Asset Coverage} = \frac{\text{Fixed Assets}}{\text{Total Equity}} \quad (5)$$

Over the past decade, there has been an increased emphasis on working capital management through improved cash systems, better stock control and improving credit management systems. Therefore one must be careful in comparing the working capital management with those of even 5 years ago.⁶ According to Keasy, Hudson and Littler (1998, p. 117) the best one can do is to calculate following ratios and see if they are improving or deteriorating for the company of interest and how they compare to those of its close competitors. The stock or inventory turnover measures how quickly inventory is produced

¹⁴ Ross, Westerfield, Jaffe, (2000) 'Corporate Finance', pp. 32-33

⁶ Keasy, Hudson and Littler (1998), 'The intelligent guide to Stock Market Investment', p.116

and sold. The ratio of creditor and debtor days presents the average collection period of accounts receivable and accounts payable respectively.¹⁴

$$\text{Stock Turnover} = \frac{\text{Cost of Sales}}{\text{Average Stock}} \quad (6)$$

$$\text{Debtor Days} = \frac{\text{Cost of Sales}}{\text{Average Debtors}} \quad (7)$$

$$\text{Creditor Days} = \frac{\text{Cost of Sales}}{\text{Average Creditors}} \quad (8)$$

Financial leverage: Financial Leverage is related to the extent to which a firm relies on debt financing. Debt puts pressure on the firm because interest and principal payments are obligations. If these obligations are not met, the business will suffer financial distress, where the ultimate distress is bankruptcy.¹⁴ However one should not neglect that debt is an important form of financing. Debt provides a significant tax advantage, because interest payments are tax deductible. According to Ross, Westerfield and Jaffe (2000, pp. 32-35), Debt-to-Equity ratios provide information about protection of creditors from insolvency and the ability of the firm additional financing for potentially investment opportunities. The Interest Cover measure is whether a firm is generating sufficient profits to meet interest payments. This expense is an obstacle that a firm must surmount in order to avoid default.¹⁴

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}} \quad (9)$$

$$\text{Interest Cover} = \frac{\text{Profit before Interest and Tax}}{\text{Total Interest Payable}} \quad (10)$$

¹⁴ Ross, Westerfield, Jaffe, (2000), pp. 32-33

Profitability: According to Ross, Westerfield and Jaffe (2000, pp. 33-35) measuring profitability of the firm is one of the most difficult tasks of financial performance measurement. The most important conceptual problem with accounting measures of profitability is that they don't give a benchmark for comparisons. In general, a firm is profitable in the economic sense if its profitability is greater than investors can achieve on their own in the capital markets. Two common measures of managerial performance are the ratio of income to average total assets ROA and return on equity ROE. The most important difference between the ROA and the ROE is due to financial leverage.

$$\text{Net Return on Assets} = \frac{\text{Net Income}}{\text{Average Total Assets}} \quad (11)$$

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Average Equity}} \quad (12)$$

The sustainable Growth Rate: Ross, Westerfield and Jaffe (2000, p. 36) argue that this ratio is very helpful in financial analysis since it measures the maximum rate of growth a firm can maintain without increasing its financial leverage. The value for the sustainable growth rate is calculated:

$$\text{Sustainable growth rate} = \text{ROE} \times \text{Retention ratio} \quad (13)$$

Market value: The market value of common stock is the price of a share multiplied by the number of shares outstanding. The market price is the price of a stock that buyers and seller establish when they trade a stock; sometimes the words "fair market value" are used to describe market prices. The price to earnings P/E ratio allows financial analysts to compare the share prices of different companies. It should be noted that the earnings per share denominator of published P/Es is based on the most recent earnings of the company.

Of course, since the investors are more interested in the future expected earnings might be more useful.

When using the P/E ratio, one should be aware of its implications, sensitivities and adjustments. A low prospective P/E (relative to the sector and close competitors) for example would indicate that on an equivalent earnings basis, the price of the share is less than its competitors. At the first sight a lot of investors would conclude that the stock is under priced. However even though this low P/E ratio it might be the case that the particular share is overpriced. This is especially the case for sectors that come into fashion (for example bio-tech stocks in the late 80s) and have high-inflated P/E ratios.⁶

$$\text{P/E ratio} = \frac{\text{Market Price}}{\text{Current Earnings}} \quad (14)$$

Estimating the future expected earnings through the current earnings and assuming a sustainable growth rate one can calculate the PEG-ratio (prospected earnings growth ratio) as an extension of the P/E ratio. However in case of negative earnings neither the calculation of the P/E ratio nor the PEG ratio makes sense. In this case one can calculate the price to revenue ratio. Moreover firm's revenues are commonly less volatile than earnings.

$$\text{Price to Revenue} = \frac{\text{Market Price}}{\text{Current Revenue}} \quad (15)$$

$$\text{PEG - ratio} = \frac{\text{P/E - ratio}}{\text{Expected Earnings Growth}} \quad (16)$$

In contrast to the P/E ratio, which compares the price one has to pay for a share to the amount of distributable profit available per share, the dividend yield contrasts the price for a share to the current dividend received by an investor. Hereby the Payout ratio determines how much of the current earnings are

⁶ Keasy, Hudson and Littler (1998) p. 122

distributed to the shareholders. Finally the Price or Market-to-Book (M/B) Value is calculated by dividing the market price per share by the book value per share. In this case one should use the common equity liquidation value per share as a proxy for book value per share.¹⁴

Investors who buy stocks with low price to book ratios believe that they are getting stocks at a price close to their liquidation value, and that they will be rewarded for paying low prices for assets.³³ In his empirical research O’Shaughnessy (1998, pp. 79-99) came to the result that the market clearly rewards low price to book ratios and punishes high ones.

$$\text{Price to Book value} = \frac{\text{Market price per share}}{\text{Book value per share}} \quad (17)$$

$$\text{Dividend Yield} = \frac{\text{Dividend per share}}{\text{Market Price}} \quad (18)$$

Screening without forecasting: According to Penman (2001, p. 81) stock screening is another method that avoids the forecasting of payoffs. Typically screening methods identify an indicator of mispriced stocks. Penman (2001, pp. 80-82) classifies between technical and fundamental screens. He argues that fundamental screening is a cheap fundamental analysis. It accepts the denominator of the screen as an indicator of intrinsic value and accepts the spread between price and this number as an indicator of mispricing.

It uses little information, which is an advantage. It may be cost effective if a fundamental analysis is too expensive, but it can lead to wrong results if that one number is not a good indicator of intrinsic value. According to Penman (2001, pp. 80-82) typical fundamental screens are price to earnings (P/E), price to book value (P/B), price to cash flow (P/CFO) and price to dividend (P/d) screens. A screening strategy suggests buying firms with low price to dividend

³³ J. O’Shaughnessy (1998), What works on Wall Street: A Guide to Best-Performing Investment Strategies of All Time’

ratio and selling firms with high P/d ratio. In contrast technical screens identify positions on the basis of indicators that relate to trading. Penman (2001, p. 82) lists the following examples for technical screens:

Price screens: Buy stocks whose price has dropped a lot relative to the market and sell those whose prices have increased a lot. The rationale: large price movements can be deviations from fundamentals that will reverse.

Neglected stock screens: Buy stocks that are not followed by many analysts. The rationale: these stocks are under priced because the investor “herd” which follows fashions has deemed them uninteresting.

Insider trading screens: Mimic the trading of insiders. The rationale: insiders have inside information that they use in trading. “However most of these strategies are justified on the basis that they worked in the past, but there is no guarantee that the future will be like the past. Using a little information has lower cost but also its drawbacks”.²⁸

Evaluation: The last step of the CORE approach is to bring together the first three steps and form an overall evaluation. According to Keasy, Hudson and Littler (1998, p. 125) how this step is approached depends on the individual investor. One possible way is to check whether analysts’ reports or recent news items support the results obtained.

4.3.4 Business Valuation Models

In addition to CORE-approach, there are several business valuation models have been promoted by economic theory. According to Spremann (2002, p. 140) valuation models provide a ‘tool set’ for business evaluation. He further argues that there is no ‘right’ or ‘correct’ valuation model, the mindset concerning which factors are determinant for business valuation has changed

²⁸ Penman (2001), pp. 44-46

over time. Each valuation model had its prime of application, where after a certain time period new knowledge came up and it was replaced.

This is in line with Penman (2001 pp. 14-15) who argues that at one time discounted cash flow models (DCF) were the range, but after a certain time period many different models were coming up. Most of them focus on “economic profit” and refer to particular economic factors. Value – Based Management, Economic Value Added, and CFROI (Cash Flow Return on Investment) are just a few examples of them. So far which of these models an analyst should use depends on a lot of factors. The following table provides an overview of the most important business valuation models and their particular prime of application.¹

Valuation Model	Year
Asset Based Valuation	1920
Present Value	1940
Brand Value	1950
Gordon Growth Model	1960
DCF-Model	1970
Corporate Governance	1980
Real Options	1990
Intellectual Capital	2000

TABLE 4.1: Business valuation models and their prime of application¹

In the frame of our literature research we recognized that the majority of academic writings focus to a large extent on asset based valuation, present value and DCF-models when valuing corporate stocks. Hence we are going to describe solely these concepts in the theoretical framework.

Asset based valuation: According to Penman (2001, p.44) asset based valuation estimates a firm’s value by identifying the value of its assets. The value of the equity is then calculated by deducting the value of the debt. Penman (2001, pp. 44-46) argues that asset based valuation suffers from a couple of serious drawbacks. First assets listed on the balance sheet may not be

¹ Spremann (2002), pp. 140

traded often, so market values may not be available. Moreover market values if available, might not represent the value of the particular use to which the asset is put in the firm. In addition it is difficult to determine the value of intangible assets such as brand names or know how.²⁸

Finally, Penman (2001, pp. 44-46) argues that even if individual assets can be valued on their particular market values, the sum of the market values of all identified assets may not be equal to the value of the assets in total. This is because assets are used jointly and combining them in a way to have a synergy between them creates value. Asset based analysis is used to value firm when its main assets are natural resource.

Present Value: The present value of an investment is basically calculated by discounting the future cash streams of the investment to the present. Penman (2001, pp. 110-112) argues that to discover the value of the business one can calculate the present value of the firm's operations by discounting the cash flows from all projects. Several PV-approaches are promoted by economic theory. For example in the early stage of PV- analysis Grahamⁱ used the earnings from the current income statement as estimation for the future cash streams. However there is no guarantee that the future will be like the past, using a little information has lower cost but also its drawbacks.

Penman (2002) argues that in order to produce an estimate of the value of the investment the investor has to forecast the expected cash streams and finally convert this forecast to a valuation. "Forecasting is the heard of fundamental analysis...because the relevant information for forecasting can be identified only after defining what to forecast; earnings? Dividends? Cash flows?" A DCF-valuation model can be formulated using either the growth of value drivers like dividends or free cash flows, or a series of annual investment

²⁸ Penman (2001), pp. 14-15, pp. 17-18, pp. 44-46

ⁱ B. Graham, "The Father of 'Security Analysis', wrote first edition of 'Security Analysis' in 1934, and first edition of 'The Intelligent Investor' in 1949, <http://www.fhsu.edu/econ/tom/bgraham.html>, 22.11.2002

decisions.³¹ Since growth is regarded as the more familiar approach the following part will focus on models using either dividends or free cash flows.

Dividend discount model: According to Penman (2001, p.107) most investment textbooks focus on the dividend discount model in their fundamental analysis chapters. According to Ross, Westerfield and Jaffe (2000, p.107) the value of a stock with a constant dividend is given by the formula below. Note 'r' is the discount rate, which is assumed to be constant. This formula indicates that dividends must be forecast into the future.

$$PV = \frac{\text{Dividend}}{r} \quad (19)$$

Gordon Growth Model: Assuming that dividends are growing on a constant growth rate one gets the constant dividend growth or Gordon growth model. Note that Dividend is the dividend at the end of the first period and g is the sustainable growth rate obtained from formula (13).

$$PV = \frac{\text{Dividend}}{r - g} \quad (20)$$

According to Kotzegger (2001, Part 3: Fundamentale Analyse und Aktienbewertung) the discount rate 'r' for the DDM is estimated using the CAPM. Assuming that dividends are growing at a differential growth rate one gets the value of a stock using following formula.¹⁴

$$PV = \sum_{t=1}^n \frac{\text{Div} \times (1 + g_1)}{(1 + r)^t} + \frac{\text{Div}_{n+1}}{r - g_2} \times (1 + r)^n \quad (21)$$

Ross, Westerfield and Jaffe (2000, p. 463) argue that any change in dividends will exactly offset by a price change such that, the net effect is zero. In other words paying dividends does not create value. Based on that Penman (2001)

³¹ English (2002), p. 33

¹⁴ Ross, Westerfield, Jaffe, (2000) 'Corporate Finance', p.101

concludes the so-called dividend conundrum; equity value is based on dividends but forecasting dividends over a finite horizon does not give an indication of value. He argues that the DDM forecasts something that is not tied to value. According to academics the application of the DDM is useful when the firm's payout is permanently tied to the value generation of the firm, for example when the company has a fixed payout ratio.²⁸

Discounted Cash Flow FCFE, FCF to Equity Model: Penman (2001, pp. 110-112) argues that the firm is just a lot of projects combined; to discover the value of the firm, one can calculate the present value of cash flows from all projects in the firm's operations. The total cash flow from all projects is then referred to as the cash flow from operations. Investments require cash outlays, called cash expenditures or cash investment. The difference between the cash flow from operations and cash investment is called net cash flow or free cash flow because it is part of the cash from operations that are "free" after the firm reinvests in new assets. According to Spremann (2002, p. 166) the formula for the DCF model is as follows:

$$DCF = \sum_{t=1}^n \frac{FCF_t}{(1+r)^t} + \text{Continuing Value} \quad (22)$$

The applied discount rate should be one that is appropriate for the riskiness of the cash flows from all projects.²⁸ In this case he suggests using the firm's cost of capital for operations. He further argues that DCF analysis-using FCFs has the advantage that cash flows are not affected by accounting rules and DCF analysis is a straight application of NPV techniques. However since analysts forecast earnings, adjusting earnings forecasts to free cash forecasts requires further forecasting accruals. Additionally free cash flows are difficult to estimate for long time scopes, whereas DFC analysis does not measure value added in the short run; value gained is not matched up with value given up. Penman (2001, pp. 112-113) concludes here that; when the investment pattern produces constant free cash flow, or free cash flow at a constant growing rate,

²⁸ Penman (2001), pp. 109-111

DCF analysis is a good concept of valuing individual shares as well a corporation as a whole.

Discounted cash flow FCFF, FCF to the Firm Model: In addition to the FCF to equity model mentioned above, Kotzegger (2001, Part 3: Fundamentale Analyse und Aktienbewertung) shows the ‘Free Cash Flow to the Firm Model FCFF’, where FCFE is the Free Cash Flow to Equity and T_c the corporate Tax rate.

$$\text{FCFF} = \text{FCFE} + \text{Interest Expense} \times (1 - T_c) + \text{Preferred Dividends} + \text{Repayment of Debt} - \text{New Debt} \quad (23)$$

Kotzegger (2001) argues that FCFF models are especially useful for companies with high leverage and firms with negative FCFE. For the discount rate he suggest to use the WACC, the weighted average cost of capital.

4.3.5 Qualitative Business Valuation

In the previous sections we discussed several quantitative business valuation approaches. In addition to these concepts academics suggest the qualitative business analysis. Qualitative business valuation examines the economic condition of the underlying business by evaluating the company from an interdisciplinary microeconomic perspective. According to Radinger (2001) this approach contains the qualitative analysis of the following key determinants for business success:³⁴

- Know How
- Quality of the Management
- Strategy
- Competition and Market position

³⁴ M. Radinger (19th June 2001), ‘Workshop Fundamentalanalyse’, Wirtschaftskammer Judenburg

-
- Ownership structure

Given its extend and complexity Keasy, Hudson and Littler (1998, pp. 208-209) argue that it is difficult for an investor to analyze and evaluate all relevant key determinants of business value. However, since the research question of this study intends to investigate those factors that are the most important when determining the value of the stock, we listed a several subjective chosen key determinants and let the respective fund managers identify the relative importance of each factor in coherence with determining the value of a stock. In case a particular fund manager looks at additional qualitative key determinants we asked him or her to specify them. Due to the mentioned complexity and extend of business factor analysis we provide merely an overview with a set of ‘strategy analysis’ templates.

Ansoff’s product market leadership- this approach compares the product of a company with its market (both demand and supply).³⁵ Is the product a radical leader, superior or merely as the rest of the market? Are the demands for the product well defined and can one characterize future demand trends? Do barriers to entry characterize the market?

Porter’s value chain analysis- the ‘value’ refers to the idea that each part of the chain adds characteristics to the product that are evaluated by the customer.³⁶ Here the main question is that of understanding where are in the value of the chain, the determinants that might give rise to product differentiation or cost leadership. From this viewpoint one could develop a competitive strategy, which might lead to future success by the efforts, a firm is making in different aspects of value chain.⁶

Hamel and Prahalad’s competing for the future- this approach emphasizes management and corporate culture as factors of future success.³⁷ Hamel and

³⁵ H. I. Ansoff (1965), *Corporate Stategy*, McGraw-Hill, New York

³⁶ M. Porter (1985), ‘Competitive Advantage Creating & Sustaining Superior Performance’, Free Press, NY

³⁷ G. Hamel and C.K. Prahalad (1994), ‘Competing for the Future’, Harvard Business School Press, Boston,

Prahalad (1989, pp. 63-76) argue that the successes come from a company having defined and shared ambitions. They argue, “The whole company has to understand what needs to be done to win the competitive war.

The whole company is driven towards delivering the future needs and its commitment in constantly improving its core competences”.³⁷ For example a successful firm focuses on innovative products or emphasizes on a particular aspect of service. For instance one might ask what has lead McDonald’s to its global domination of fast food market product phenomena or more a reflection of its management’s dedication to win the competitive war?

4.3.6 Top Down Investment

The objective of top down investment is to identify large technological, social, political and economical trends, and then invest accordingly.⁶ In order to explore these trends, top down investors make a broad assessment of whole economies and industries.

Trend analysis: According to Keasy, Hudson and Littler (1998, pp. 192-194), the following technological, political, social, and demographic trends provide possible investment ideas.

Technology and communications: Satellite and cable technology, the Internet and many other developments are transforming the media and communicating industries. As a result of improved communication, for example the structure of automobile sector has changed dramatically toward global outsourcing which in turn reduced purchasing cost.

Political trends: Keasy, Hudson and Littler (1998, p. 194) argue that political factors can be important in investment decisions. Empirical evidence showed that in the UK the stock market has performed better under either of the two

MA and G. Hamel and C.K. Prahalad (1989), ‘Strategic Intent’, Harvard Business Review, 67, 3, pp. 63-76

main political parties after the effects of random fluctuations have been taken into account.³⁸

Baby boomers and the aging population: The “baby boomer” generation is the large generation of people who were born in the baby boom after the Second World War. These people have now reached the age where they are becoming seriously interested in their retirement. The top down investment idea is that the baby boomers will direct a wall of savings indiscriminately at the equity market.

This will result in a fantastic bull market for equities. Another investment idea is to try to take advantage of the fact that the population is aging quite quickly in the most developed countries. To an extent, this idea is related to the baby boomer idea described above in that an aging population may be more inclined to direct money into the equity market in order to save for retirement. For example, a reflection of the “aging population” is the growth in financial services.

The increased spending on leisure: A very established trend in Western economies is for people to become generally wealthier. Thus industries catering in leisure activities should be able to take advantage of a very positive long-term trend.

General economic analysis: The economic situation is closely linked with developments in international financial markets.³⁹ Companies ultimately depend on the buoyancy of the economy meaning that individual companies are affected by economic variables in different ways.⁶

Business cycle: According to Schwanfelder (2000, p. 106) a particular economy is to a high extent influenced by the development of its business

³⁸ R. Hudson, K. Keasy and M. Dempsey (1998), ‘Share Prices under Tory and Labor Governments in the UK since 1945’, Journal for Applied Financial Economics

³⁹ <http://www.cesifo.de/IfolInstitute>, 26.11.2002

cycle. If the economy is in recession, most companies will suffer to some extent but some do much worse than others. Cyclical companies, such as construction businesses, are particularly badly affected by downturns in the business cycle; where other companies such as supermarkets are much less affected.⁶ Stock prices follow more or less these economic cycles. In order to invest according to these cycle's investors should be aware of these indicators that specify a particular phase.

Even though those parameters are in most cases well known, they underlie some scope of interpretation. Especially the boundaries between the particular phases are not analytically determinable.⁶ Hence a global business cycle orientation might be difficult but not impossible. According to Schwanfelder (2000, p. 107) a simplification of this procedure is to focus on the development of particular economic indicators. The most important indicators that have influence on the stock market are following.²³

Exchange rates: Exchange rates have a direct effect on the development of stock prices. Export-oriented European companies will for instance suffer in case the Euro becomes more expensive relative to the USD. Exports into non-Euro countries will become more expensive with a consequence that the revenues and the earnings of these companies will decline. Import oriented companies on the other hand will profit from a relative increase of the Euro against the USD.

Interest rates, inflation and liquidity: Decreasing interest rates lend wings to the stock market. Decreasing interest rates mean, that businesses are able to refinance easier. Moreover lower costs of interest will lead to higher earnings. Moreover an uncontrolled increase of market liquidity enhances inflation. An increasing inflation generally has bad influences on stock prices.²³

²³ W. Schwanfelder (2000), 'Aktien für Fortgeschrittene: 56 maßgeschneiderte Strategien für Auswahl und Timing', Campus, Frankfurt/New York, p. 107

Unemployment rate: Increasing unemployment rates are commonly a bad sign for the development of stock prices. However the consequence of this indicator is usually difficult to predict.²³ However as observed by Schwanfelder (2000, p. 108) the correlation between these factors is not one to one: It is not valid to assume if for example the interest rate increases, the stock price will fall. Since economic indicators are interrelated any development of the stock price is caused by more than one factor. Moreover there must be made an additional restriction. Stock prices change only remarkably if the change in the particular indicator has not been expected in advance. In other words, changes in these factors only have an impact on the stock price these changes surprise. Has the stock market been expecting the particular change, the share prices have already changed in the past.²⁰

Economic Surveys: The objective of an economic survey is to forecast macroeconomic trends in a particular economy for a period of up to two years. Because of the strong links between particular countries' economies and the world economy and in particular to the European economy, a forecast is also made for the European Union and other important countries. A well-founded analysis of the economic situation is the basis of the forecast. The most important features of the forecast are the changes in real GDP and its use components, the development of prices, labor market and income as well as government revenue and expenditure.³⁹

Analysis of geographical region: An important and constantly recurring theme in top down investment is the idea that it is advantageous to allocate some assets to particular equity markets. Some markets have, at different times, been considered to have particular features and to be worthy of special attention.⁵ According to Keasy, Hudson and Littler (1998, pp. 188-190) some of these markets are listed below:

- Post-war Japan

³⁹ <http://www.cesifo.de/IfolInstitute>, 25.11.2002

-
- The Tiger Economies
 - Emerging Markets
 - Europe and the EMU

In analyzing a country or geographical region an investor has to assess the economic trend of the target area. Thereby he has to evaluate the earning potential of a company in a particular country. The required economic information for this economic situation can be found in financial magazines.⁶

Market timing: An aspect closely related to top down investment is the issue of “market timing”. This is the attempt to anticipate future movements at the level of the whole stock market. Predicting these movements frequently involves addressing the major economic, social and political issues familiar to top down investors. But how can one measure when to be ‘in or out’ of the market?

According to Keasy, Hudson and Littler (1998, pp. 196-197) the most important measures of the current market value are the dividend yield, the price to earnings ratio and the bond to dividend yield. The higher the dividend yield on stocks, the better value the market offers. Controversially the lower the P/E ratio on stocks, the better value the market offers. Also, the lower the bond to dividend yields the more attractive are equities.

4.4 Literature Review on Corporate Stock Analysis

In the previous parts of this chapter, we have presented the basic concepts of corporate stock valuation and selection as described in the theoretical literature. Figure 4.12 depicts an overview of the discussed concepts.

⁶ Keasy, Hudson and Littler (1998), pp. 188-190, pp. 196-97

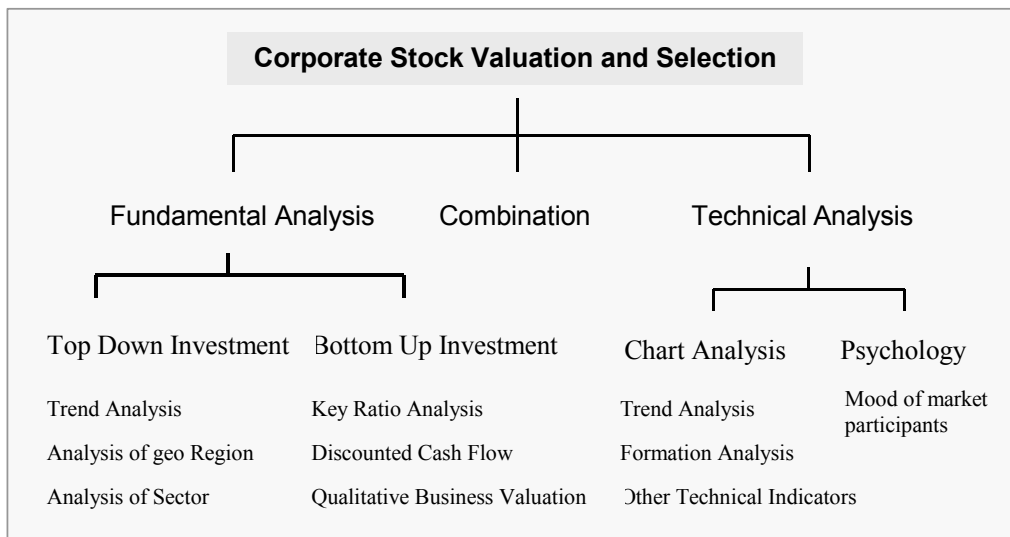


FIGURE 4.12: Overview concepts of corporate stock valuation and selection.

In addition appendix 6 summarizes corporate stock valuation and selection as presented in the previous sections. Appealing remarks have been made after reading through the theory. The purpose of this section is to evaluate the two general approaches to corporate stock analysis.

Same objective, different methods: The major concern out of the study of the theory is that the main valuation approaches available attempt to solve the same problem but stand on great divergent basis. The common issue is that of forecasting the future market price of securities. Fundamental and technical analysis differ radically in their approaches. Technical analysis is based upon the idea that prices move in trends, meanwhile, fundamental analysis is based on the premise that a given stock has an intrinsic value.

Technical vs. fundamental analysis: The focus of technical analysis is on the stock market, the direction of stock prices and trading volumes across time. The emphasis is on likely price changes using financial charts, tables and ratios with a close look at market trends and averages to determine whether the "time is right" to make an investment. The technical analyst disregards the company itself. On the other hand, fundamental analysis focuses on the relevant factors

affecting the value of the company itself, paying less attention to the direction of stock prices move in order to determine the intrinsic value of the underlying business.

Therefore we argue the main issue with the theory is the extreme stand of each method of stock analysis. This also the opinion of Phil Roth who stated: “The biggest mistake that a fundamental analyst makes is thinking that a stock and a company are the same thing. The biggest mistake a technician makes is thinking that a stock and a company are different.”⁴⁰ In fact, fundamental analysis does not include a study of price action. However, there is a common line between technical and fundamental analysis, it is the study of trends. While technical analysis studies trends in price and volume, fundamental analysis concerns itself with economic and corporate growth trends. This is somewhat an insignificant similarity given the unrelated nature of trends studied in either case.

Combine or complement? In accordance with Roth we argue that there is no single ‘correct’ or ‘best’ method for stock selection and market timing. So far each of the methods described in the previous sections of the chapter appear more or less appropriate depending on several concerns including the business cycle, the investment strategy (objective). We argue that for example in a highly fluctuating market, short-term investors tend to focus on value stocks in order to avoid excessive losses. In such a situation, investing with the stock market trend as primary indicator for final decision will be a realistic option.

Meanwhile, an investor seeking long-term capital appreciation ought to pay less attention to current trends in stock prices and focus more on assessing the value, the quality and the growth potential of individual companies or sectors. However, with a critical look at the concepts presented earlier in the chapter, we assert that it could be irrational for any intelligent investor to completely disregard one approach in favor of the other, no matter the situation. Therefore, a prudent approach will be to go through several approaches and combining

⁴⁰ Phil Roth, chief technical market analyst, Morgan Stanley Dean Witter, www.morganstanley.com

them in a way so that the presented concepts complement each other. *Consequently one has to develop her individual investment style one's investment style or strategy taking into consideration his or her investment objective.*

In this context, Keasy, Hudson and Littler (1998, p. 218) illustrate how a potential investor could apply and combine different stock picking systems by reviewing a number of concepts that led a number of famous investors, referred to as “gurus” to ‘investment success.’ However whether the particular investment success was due to exceptional skills, luck and under which conditions the promoted concepts has worked is mostly left aside.

On the overall, both technical and fundamental analyses are important methods in stocks analysis. Gaining practical knowledge of their applicability will lead to superior investment decision. The major contribution of the analysis part, presented as chapter 6 will be to add empirical and practical principles and guidelines to the knowledge already acquired from the description and evaluation of the theoretical literature.

5 MUTUAL FUNDS

This chapter describes mutual funds and presents the categories of funds available on the market. Also, the focus here is directed towards the rapport between mutual funds and market indexes. Meanwhile the chapter ends with a look at fund managers' performances in relation to the market measurement indicator.

“A mutual fund is simply a financial intermediary that allows individual or group of investors to pool their money together with a predetermined investment objective.”⁴¹ The mutual fund will have a fund manager responsible for investing the pooled money into specific securities (usually stocks or bonds). In other words, a mutual fund is a corporation or trust that invests a pool of assets in pursuit of a specific investment objective

Mutual funds are organized in such a way that they offer different types of funds with a fund manager or a team to take of the portfolio day after day. The board of directors selects the manager or the management team. Mutual funds offer a convenient, efficient way to invest for income and capital growth. Only if you invest in funds that are suitable to your particular needs and circumstances will you expect your investment to be efficient

Mutual funds carry fees in one form or another. A fund that requires a sales charge when money is invested is called a load fund. This fee will come out of his or her investment and be paid to either the investment company or the broker who sold the fund. Index funds have no front-end sales charges and are, therefore, no-load. Mutual funds also have annual management fees that go to pay the fund manager around 1% or 2%. Index fundsⁱ, however, have no portfolio manager and therefore pay out no management fees.⁴²

⁴¹ <http://mutualfunds.about.com/library/weekly/aa081501b.htm> 20/09/2002

ⁱ Index fund: A group of stocks that make up a portfolio in which performance can be monitored based upon one calculation, <http://www.wileyurope.com>, 25.11.2002

⁴² <http://www.wileyurope.com/cda/cover/0,,0471393150|excerpt,00.pdf> , 25.11.2002

Before investing, one must review his or her objective, risk tolerance, and time horizon and make sure they actually match with those of the fund they are about to invest in. This could be achieved by reading the prospectus as well as any other literature supplied by the fund. From our point of view, a Mutual Fund could simply be regarded as a pool of money collected from individuals and invested in securities by a fund manager. Investing with a mutual fund means for the individual investor that she acquires shares in the fund. The fund manager then invests the proceeds collected from the shareholders in a portfolio of assets.

5.1 Types of Mutual Funds

There are many types of fund companies running out there. Current literature on mutual funds recognizes that it is very difficult to classify these securities investing units. This section breaks down mutual funds into their objectives. According to the fund's objective and in line with the Encyclopedia of Finance⁴³, the following types can be identified:

Growth funds, these funds generally invest in companies with usually strong positions in their markets, stable earnings and good growth prospects. Growth funds rarely provide dividend income and are considered risky investments. *Aggressive Growth Funds*, these funds invest in very risky stocks that are expected to generate more than normal returns in the future.

Income funds, these funds are organized to offer regular income to their shareholders. Income Funds focus on paying out dividend income, and tend to disregard growth in importance of their investment.

Growth and income funds, these funds are a "blend" of both growth and value stocks. They basically combine both current income and growth value when selecting their portfolios; they therefore offer some dividends as well as possible stock appreciation.

⁴³ <http://www.ameritrade.com/education/html/encyclopedia/index.html> 29/10/02

Bond funds Bond funds invest primarily in debt securities to provide current income with preservation of principal. They generally focus on paying dividends and preserving principal.

Multifunds, which invest in other mutual funds, they are also known as fund of funds.

At the close, it is important to notice here that we do not claim to have exhausted the encyclopedia of mutual funds, however, we have identified and classified different types of mutual funds in two categories so that the distinctiveness of each type of category appear comprehensible to anyone.

5.2 Equity Funds

A stock is a share in a corporation's total asset, and a participation in its profits if it does well. Firms normally issue two types of stocks. Common stocks, which give stockholders voting rights and may also pay dividends. On the other hand, holders of preferred stock generally have no voting rights but must receive dividend payments before common stockholders. Typically, a company goes public (issues stock for the first time) when it needs to raise money, usually for expansion. This is called an initial public offering (IPO).

A good reason for investing in equity funds is that, in the past, the stock market has provided the highest returns. Also, one can achieve good portfolio diversification for much less money. “By investing a small amount of money in an equity mutual fund that holds shares in many different companies, you get diversification by the truckload. This diversification greatly reduces risk. If one or two companies do badly, the others may continue to perform well.”⁴⁴

As mentioned by Fredman and Wiles (1998 p. 340) the argument in favor of foreign equity exposure is that international investing exposes to better growth

⁴⁴ <http://www.globefund.com/centre/GettingStarted11.html>, 09/11/2002

opportunities (especially with emerging economies) or superior prospects to portfolio diversification. This international diversification is of course very important since it is crucial in risk reduction. In fact, international diversification reduces the volatility of the portfolio given the fact that “stock markets in different countries don’t move in lock step.”⁴⁵

Although the volatility of a portfolio could also be reduced through hedging with futures and options, the fact different countries always exhibit different economic development and growth prospects presents a very interesting investment choice involving risk reduction. According to their strategy the following types of equities funds can be identified: growth funds, value funds and blend funds (combination of growth and value stocks). These types of funds have been described already in the previous section. Meanwhile, according to their size, equity funds can be classified as follows:

Large-cap funds, these types of funds invest in companies whose market value is large. Most of the time, these are "blue-chip" funds that tend to pay dividends. *Mid-Cap Funds* on the other hand invest in mid-sized companies. *Small-Cap Funds are funds that* invest in emerging companies with small market value, they have a propensity to use earnings to develop rather than pay dividends.

According to the market and still in line with the Encyclopedia of Finance we can identify the following types of equity funds:

Sector funds, these funds invest in one sector, or industry, in the economy. They may focus for example, in high tech, biotech, IT or consumer goods companies.

⁴⁵ J. Fredman and Wiles, (1998), “How Mutual Funds Work”, New York Institute of Finance, Prentice Hall, Inc

International funds, these are funds that invest in foreign markets. They may invest in large or small cap stocks or specific industries. Funds exist for regions of the world such as Asia, Europe or for individual countries.

Emerging market funds, which invest basically in emerging economies of Eastern Europe and South America.

Index funds An investor wishing to keep his or her mutual fund's pace in line with a measurement benchmark of the market like the Standard and Poor's 500 may consider index funds. These funds are made up of the securities that comprise major market indexes. The advantage of index funds is that they are always in line with the market as a whole. Their downside is that they can't outperform the market.

5.3 Equity Funds and Market Indexes

An index is simply a group of stocks chosen to represent a particular segment of the market.”⁴¹ Market indexes can be described as numerical tools available for gauging the performance of stock, bonds and mutual funds. In Fredman and Wiles (1998, p. 65) words, market indicators play a very important role in mutual funds investing since they give the feel for the market behavior and facilitate performance comparison. Fund managers will often aim at doing as well or better than their benchmark index. In this regard they usually list their performance in prospectuses against that of the relevant index.

The importance of indexes can also be seen when assessing the risk of an investment. By looking at the “beta” of a portfolio relative to the beta of the relevant index, the risk of the portfolio could be also measured. Indices are numerous today. Leading benchmarks include the Standard & Poor’s 500, which measures the price changes in 500 large firms, which represents around

⁴¹ <http://mutualfunds.about.com/library>

70 percent of the US domestic economy. Below we list some of the most important international (US and European) Indexes⁹

European Stock Market Indices

- DJ EURO STOXX 50
- MSCI EUROPE Index

US Stock Market Indices

- The Dow Jones Industrial Average
- NASDAQ Composite
- Standard and Poor's 500

In the frame of our empirical study on Austrian and Swedish Mutual Funds we found that the DJ EURO STOXX 50 is the mainly used benchmark index for European equity funds. The objective of the EURO STOXX 50 is to provide a blue-chip representation of market sector leaders in the Euro zone. This index covers the 50 most representative companies from Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. Moreover it captures approximately 60% of the free-float market capitalization of the Dow Jones EURO STOXX Total Market Index, which in turn covers approximately 95% of the free-float market capitalization of the represented countries.⁴⁶

In contrast most US mutual funds, are based on the Standard and Poor's 500. However, when measuring the performance of stocks, bonds, or mutual funds, the best alternative is to consider the relevant sector or market index. Fredman and Wiles (1998, p. 65) point out that several factors should be taken into consideration when comparing fund performance with a market index:

Cash holdings, the fact that mutual funds keep a small percentage of their assets in cash for reasons including the provision of purchasing powers when

⁹ <http://www.marketvector.com/data/index.htm>

⁴⁶ <http://www.stoxx.com/indexes>

bargains arise among other, is a reason why the total returns of many funds fluctuate up and down more than those of their relevant benchmarks.

Portfolio composition, even the classic equity fund does not hold the same stocks as the market representative index, in addition to this the composition of the fund may change over time, for these reasons the fund performance is very likely to deviate from that of the benchmark.

Expenses and trading costs, as any other business entity, mutual funds incur operating and even trading, transacting and distribution costs. Therefore, even if the fund's performance matches that of the benchmark before all these costs, it would still under perform the benchmark after all costs.

5.4 Fund Managers and Beating the Market

Siegel (1998 pp. 272-274) observes that in the competitive environment of money management, the performance of the management would be measured relative to the appropriate index. He further argued that for each investor who performs better than the market, there must be another investor who performs worse than the market so that by matching the market, one is guaranteed not to do worse than the average. However, we really wonder at this point whether it is worth the effort to go out on the market and try just to match the market.

In this regard Siegel (1998, p. 272) points out that if there are enough poorly informed traders who consistently under perform the market, then it might be possible to find professionals who research stocks and actively managed funds to outperform the market. Still it is very difficult to determine exactly whether the superior returns of certain money managers are due to skills or just luck.

The most obvious aspect of this debate is that both money losers and moneymakers out on the market have solid academic background. Ellis (1975, p. 19) demonstrates that with all the transaction costs taken into consideration,

the average money manager could not outperform the market since they themselves are the major market players. In his words: “contrary to their often articulated goal of outperforming the market averages, investment managers are not beating the market; the market is beating them.”⁴⁷

This does not by anyway mean that financial advisers are useless to the average investor. Siegel (1998, p. 281) recognizes that it is very difficult to invest in stocks especially during the bear markets or whenever changes occur in market conditions. It is therefore useful to deal with a professional who can time the market and maintain a proper long-term perspective for the portfolio. In Siegel words: “ it does little good to purchase the right stocks or funds if the next time the market trembles you find yourself scurrying to the safety of money market assets.”

5.5 Advantages and Disadvantages of Stock Investment Choices

Table 5.1 summarizes the advantages and disadvantages of the three basic stock investments.

Methods of Stock Investment		
Individual Stocks	Mutual Funds	Index Shares
Advantages	Advantages	Advantages
<ul style="list-style-type: none"> • Highest potential return on investment • Allows traders to customize their portfolios to meet their investing needs • Easy to adjust the portfolio mix without disrupting the whole account 	<ul style="list-style-type: none"> • Professional money managers watch your money. They have more time & resources than most individuals who try to manage their own investments • Offers excellent diversification • Can benefit from up moves in a basket of stocks, & protects investors from company risk associated with investing in individual stocks • The safest way to invest overseas, because funds have managers watching international companies on which individual investors would find it difficult to get information 	<ul style="list-style-type: none"> • Allows investors to diversify their holdings with one decision by investing in a group of stocks as opposed to just one • If one stock is going down, it won't hurt the overall fund too much. The poorly performing stock will be balanced out by others that are advancing • Requires little time to manage

⁴⁷ C. D. Ellis (1975), «The Loser's Game, » Financial Analysts Journal, July / August

Disadvantages	Disadvantages	Disadvantages
<ul style="list-style-type: none"> • Takes more time to manage than other choices. • Extremely volatile & susceptible to bad news from a company, sector problems, & the whims of the market • Have to know how to pick a winning stock opportunity • Have to learn how to filter out unnecessary information. 	<ul style="list-style-type: none"> • Tax considerations. Investors may have to pay taxes on capital gains even if their portfolios are down • It is difficult to follow what stocks make up the mutual fund portfolio • If a team manages the fund, the members who created a good performance record last year may have left the fund unbeknownst to you • Fund will likely produce only average market gains unless it concentrates in aggressive sectors, thus losing some of the advantages of diversification 	<ul style="list-style-type: none"> • Indexes represent a set group of stocks in a fixed proportion This selection may exclude companies that you want to invest in. You may also be forced to invest in companies that you don't want to invest in just because these companies are part of the index • Index shares are traded on the exchanges & sometimes the market price will fall below the actual value of the index • Fees and commissions.

FIGURE 5.1: Advantages and disadvantages of the three basic stock investments⁴⁸

⁴⁸ <http://www.wileyeurope.com/cda/cover/0,,0471393150|excerpt,00.pdf>, 25.11.2002

6 ANALYSIS AND RESULTS

This part of the thesis presents the empirical findings of our research. The purpose of this chapter is to present and analyze the collected data and draw inferences connected with the presented theory on corporate stock analysis. This chapter is intended to meet the research objectives (2) and (3) as stated in the purpose of the study.

6.1 Stock Valuation and Selection Method

This section of the empirical analysis focuses on the overall stock valuation and selection method. In order to answer this research issue we posed the selected fund managers the question below. Note, under ‘Provide reasons for your choice’ we intended to capture the rationale behind the particular choice.:

How important are the following valuation methods when selecting an ordinary share?

	Percentage of appliance							
Fundamental Analysis	100%	80	60	50	40	20	10	0%
Technical Analysis	100%	80	60	50	40	20	10	0%
Quantitative Methods	100%	80	60	50	40	20	10	0%

TABLE 6.1: Stock Valuation and Selection Method

As can be drawn from Table 6.2 and Figure 6.1 respectively, the majority (7 of 10) of fund managers put more effort into the fundamental valuation of the underlying business, when selecting an ordinary share whereas two out of ten fund managers focus more on technical analysis.

Overall Stock Valuation Method	Fund 1	2	3	4	5	6	7	8	9	10	Average
Fundamental Analysis	40%	20%	33%	50%	60%	60%	80%	10%	60%	40%	45%
Technical Analysis	10%	60%	27%	25%	20%	40%	20%	80%	20%	20%	32%
Quantitative Methods	50%	20%	40%	25%	20%	0%	0%	10%	20%	40%	23%

TABLE 6.2: Stock Valuation and Selection Method

So far by looking at Table 6.3 one can observe that neither fundamental nor technical analysis is used in isolation. As the Table further indicates, all the funds combine fundamental with technical analysis. Meanwhile eight out of ten apply a combination of fundamental-, technical analysis and quantitative concepts.

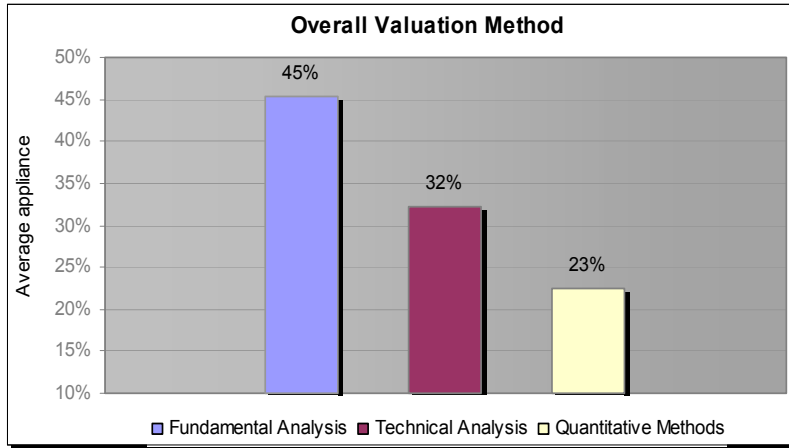


FIGURE 6.1: Results Overall Stock Valuation and Selection Method

Combination of Valuation Methods	Fund 1-10
Fundamental & Technical	10
Fundamental, Technical & Quantitative	8

TABLE 6.3: Combination of stock valuation and selection method

The comments obtained under ‘Provide reasons for your choice’ reveal that investors put more effort into the fundamental valuation of the underlying stock. This is probably because investors consider that market prices are driven by fundamental values in the long run, though price fluctuations in the short run are likely to occur and affect the value of their investment. From our point of view, identifying the intrinsic value of a common stock is a reference point in determining whether the market has correctly priced the share. Moreover, recognizing if a stock is being under-priced or over-priced is an important input as regards the buy, sell or hold decisions.

Also, the outcome research shows that a minority of the studied investors (2 out of 10) uses technical analysis as their main valuation instrument. Comments under ‘Provide reasons for your choice’ disclose that, technical analysis is mainly used for market timing, and trading purposes. From the above, we suggest that investors who rely on historical prices when trading stocks should use fundamental concepts to support their findings and vice versa. For example, a technical trader investing into a stock indicating an upward trend can support her decision with fundamental estimation of the underlying shares’ value. We consider this as essential because due to market perceptions, a given trend can keep on increasing without reflecting the real appreciation of the stock value, rather the perceptions of market participants. Investing with such a trend involves the risk of a severe drop in the value of the investment even on a very short-term. However, to which extent the concepts ought to be combined depends upon several issues like market conditions (business cycle), investment objectives or strategy among others.

Quantitative concepts turned out to be used solely as an instrument to reduce the sample size of the target businesses. In this context some fund managers apply the so-called ‘two face’ approach. Summarizing the rationale behind the application of the presented concepts, we suggest the use of the ‘two face’ approach. Within the first face, the quantitative analysis, one reduces the sample size. Meanwhile the second face approach uses technical and fundamental concepts and combines them using the best ideas from each from each method to figure out a superior way to pick stocks.

6.1.1 Investment Philosophy

As can be drawn from Figure 6.2, four out of ten fund managers are solely interested in beating their relevant benchmark index. Another four are merely interested in real or absolute returns. The remaining two try to achieve both absolute return and outperform their relevant index.

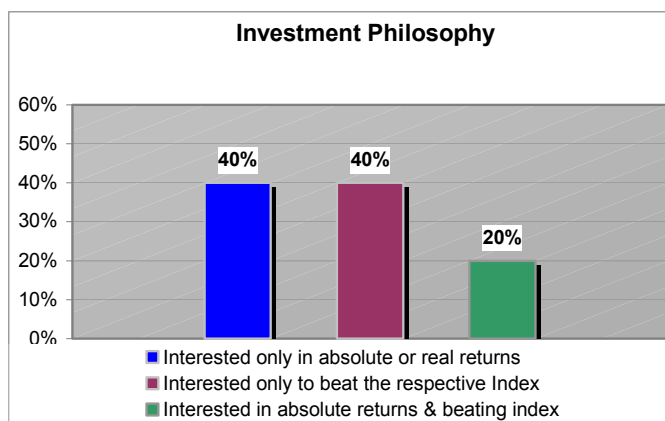


FIGURE 6.2: Investment Philosophy

The results as appeared above highlight the fact that the benchmark index is a very important instrument in gauging the performance of equity funds and thereby that of stocks. In this regard Siegel (1998) argues that market indexes are indicators against which mutual funds measure their performance. The results also reveal that achieving real returns is the target of 50 percent of the survey sample. However which investment philosophy should be assumed depends on several factors. From our point of view sticking to a particular benchmark index has two aspects. Being in line with an index is supposed to provide some degree of safety in the long run, the reason being that broad market representative indexes will always appreciate over the long run. On the other hand, this seems to be a psychological attitude.

Things will not always follow suit in the short and medium term. The fact is that in the present market situation where a broad indicator like the Euro Stoxx 50 loses 30,89%²⁴ within one year, trying to mimic this particular index will not be a good attitude.¹ In a bull market, the market index is rising and a well-diversified portfolio will follow the index up. In a bear market one has to carefully pick the stock in which to invest otherwise the portfolio could decrease with the overall index. It becomes more and more important in bear markets to

²⁴ <http://www.comdirect.de>, 18.11.2002

¹ Our interviews reveal that managers have restrictions limiting the extent to which they may deviate from the index

pick the right stocks. Practically we believe more in the “real or absolute” return approach in a bear market, with more focus on the performance of stocks in the portfolio than that of the relevant index. In such a case the position of the benchmark index enables us basically to see the market behavior and direction.

6.1.2 Time horizon, Investment Strategy and - Approach

This section investigates which time horizon, investment strategy and investment approach are considered by the selected fund managers. In order to answer this research issue we posed the selected fund managers the question under Appendix 5.2.

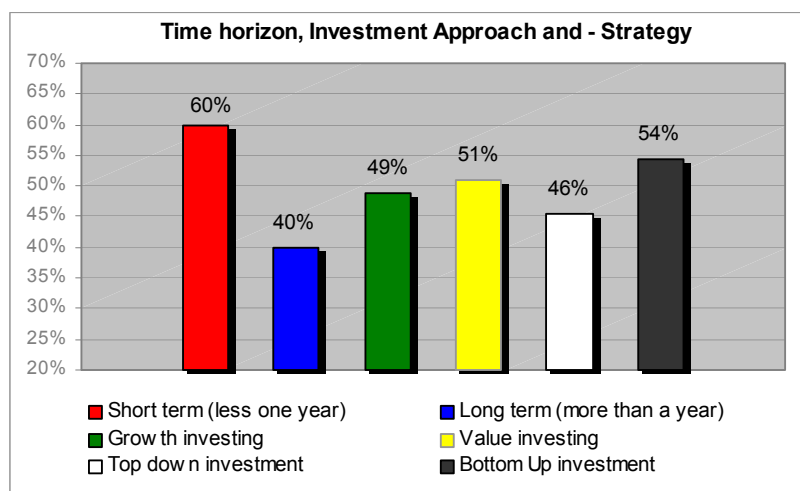


FIGURE 6.3: Time horizon, Investment Technique and - Approach

Investment Strategy: Figure 6.3 exhibits the fact that on average our survey sample invests 49% percent into growth and 51% into value stocks, which is in line with the study carried out by Fidelity.¹⁹ The stated study reveals that on average fund managers tend to invest 50 percent into both growth and value stocks. Value stocks tend to have slower and more stable earnings growth rates; earnings are more predictable, which generally makes them less volatile. In contrast growth stocks are expected to have a long-term earnings potential that are higher than the market's expectations. Hence how much one allocates into

¹⁹ <http://www.fidelity.com>, 10.11.2002

value vs. growth depends on her risk tolerance, and investment objective. Additional information includes the fact that, in the short-term, investors shifts more or less towards growth or value stock style depending on the particular market conditions. For example in the current depreciating market, some investors favor value stocks in order to avoid excessive losses and to achieve steady income. However the difficult aspect is to predict when the market is going to shift towards growth or value style investment.

Time horizon: As far as the time horizon is concerned, technical traders tend to apply more short-term approach of stock investment, meanwhile the reverse holds for fundamental investors (see Appendix 5.2). What is important to notice from the survey sample is the fact that even the 100 percent short-term investor does not completely disregard fundamental stock valuation concepts. This is in line with Greenwald, Kahn, Sonkin, and van Biema (2002) who argue that long-term investors are basically fundamentalists, whereas short-term investors apply either fundamental, technical, or a combination of these methods. See figure 6.4. This further reinforces our argument for mixture of both concepts when selecting on ordinary stock.

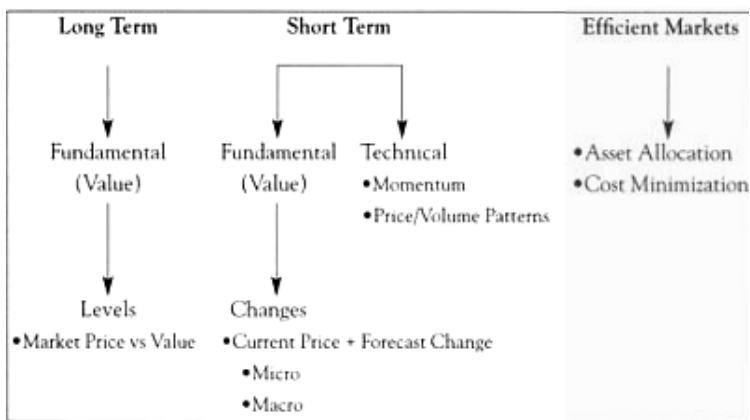


FIGURE 6.4: Investment time horizon²⁹

Investment Approach: The idea behind top down investment is recognize geographical or sectoral trends, and invest accordingly. In contrast bottom up

investors proceed in the opposite direction, they identify successful companies, and invest accordingly.

As can be drawn from Figure 6.3 the survey on European equity fund managers focus more (54%) on identifying successful companies and sectors rather than on evaluating geographical regions. A possible explanation for this is that (Western) Europe can be considered as an integrated economy. Due to this fact, the analysis of a particular geographic location is less significant; the investor's interest is more shifted towards sectors and individual businesses.

6.2 Factors, Indicators and Valuation Concepts

Which are the most important economic factors and indicators when valuing and selecting an ordinary share? In order to answer this research questions we requested the fund managers to rank several factors and indicators according to their practical importance.

These factors and indicators have been promoted by academic theory to be the most common or mainly used when valuing or selecting a stock. The 'importance' of each factor has been obtained by calculating the average of the obtained weights from the survey sample. Table 6.4 shows the ranking of the most important factors and indicators identified.

No	Most important factors and indicators	Average
1	Financial situation	4,1
2	Share holder value policy	4,1
3	Business climate index	4,0
4	Expected earnings	4,0
5	Sales development, future demand trends	4,0
6	Support & resistance levels	4,0
7	Market share & distribution network	3,9
8	Return on Equity	3,9
9	FCFF: Free Cash Flow to Firm Model WACC	3,9
10	Trend lines	3,8

11	Chart formations	3,8
12	Competitive strategy	3,7
13	Market development	3,7
14	P/E ratio	3,7
15	Relative development of sector comp to market index	3,7
16	Customer orientation & service	3,6
17	Strategic planning	3,6
18	Debt to Equity	3,6
19	EPS: Earnings per share	3,6

TABLE 6.4: Most important factors and indicators

Table 6.4 above reveals that the firm financial situation, the shareholder value policy, the business climate index, the expected earnings and the future demand trends and sales development are the most important factors fund managers look at when investing in ordinary shares. An obvious observation is that all these five most important factors are more related to the firm's future standing than on historical performance. This reinforces the position of financial economics that past information is less relevant than expected performance in business valuation.

Also, in comparison to the study by Kjellman and Granlund (1998) on the Finnish stock market where the following factors growth potential, management competence, expected P/E ratio and expected profit were found the most important. Common to these two studies is the firm's expected earnings or expected profit as named by Kjellman and Granlund.

6.2.1 Financial Ratio Analysis

Recall that there are basically two ways investors apply key ratios. First, the so-called 'stock screeners' trade on a rule of thumb, for example buy a stock with low P/E or low price-to-book ratios. Though this is quite simple and does not require much effort, it has its drawbacks. In contrast the fundamental investor distinguishes between price and value, he calculates for example which P/E that a particular company is really worth. Our research does not differentiate

between the mentioned types of investors rather we concentrate on determining the important factors when dealing with ratio analysis. Table 6.5 below reveals that the following ratios: debt to equity ratio, return on equity, earnings per share and price to P/E ratio are the main factors within the frame of key ratio analysis.

Financial Ratios Analysis: General	4,0
Debt to Equity	3,6
Return on Equity	3,9
EPS: Earnings per share	3,6
P/E ratio	3,7

TABLE 6.5: Relative importance key ratio analysis

Key ratio analysis in general is being considered as an important approach (4,0) when valuing and selecting ordinary stocks. According to some respondents key ratio analysis is a vital instrument to check how healthy the underlying business is. Spreman (2002) argues that the preparation and presentation of financial ratios is a necessary step when valuing a business.¹

However, we would like to mention here that key ratios do not tell the financial investor enough about the stock value of the underlying company; instead they provide information of the company's past financial performance and earnings abilities. We also maintain that key ratio analysis will be appropriate when considering one sector with a peer group of firms that have similar operations in order to get a base for selecting among them.

We therefore conclude that key ratio analysis is an essential and quick method to check out the financial condition of the considered business in relation to peers before pursuing further steps of share valuation and selection.

¹ Spreman (2002, p. 14)

6.2.2 Discounted Cash Flow Analysis

As can be drawn from table 6.6 Discounted Cash Flow Analysis in general is being considered as a relatively important approach (3,4). Table 6.6 below shows the relative importance of different DCF models.

Discounted Cash Flow approach: General	3,4
FCFF: Free Cash Flow to Firm Model WACC	3,7
FCFE: Free Cash Flow to Equity Model CAPM	2,6
DDM: Dividend Discounted Model CAPM	1,9

TABLE 6.6: Relative importance DCF models

However when looking at the values obtained one can observe significant differences in the importance among the above listed models. According to the survey sample, the dividend discount (1,9) and the free cash flow to equity model using CAPM (2,6) are considered as quite unimportant, whereas the free cash flow to the firm model using WACC (3,7) is being regarded as the most appropriate DCF approach when valuing a business. Recall that an alternative way to estimate the value of an investment consists of forecasting the expected cash streams and finally convert this forecast to a valuation model.²⁸

A valuation model is the architecture for fundamental analysis that directs what is to be forecast as a payoff, what information is relevant for forecasting, and how forecasts are converted into valuation. With reference to the forecasting of dividends, Penmann (2002) criticizes the DDM by arguing that the DDM forecasts something that is not tied to value. In addition he maintains that the application of the DDM is useful when the firm's payout is permanently tied to the value generation of the firm, for example when the company has a fixed payout ratio.²⁸

From our point of view the DDM could be appropriate in a situation when the payout ratio of a given stock is constant or growing at a constant rate. The comments obtained from our survey outline the fact that many of the

²⁸

interviewed equity fund managers emphasize on forecasting free cash flows when determining the value of an investment. This is in line with S. Feldman, who states” The DFCF model has been shown in independent, peer-reviewed research to be the most accurate method of valuation for on-going businesses, and DFCF has grown to be the most widely used method of valuation by finance professionals⁴⁹ FCF’s have the advantage of not being affected by accounting rules.” However, since analysts forecast earnings, adjusting earnings forecasts to free cash forecasts requires further forecasting additions. Additionally free cash flows are difficult to estimate for long time scopes.²⁰

Despite these disadvantages we strongly recommend the calculation of FCFs when estimating the value of an investment. Additionally one can observe that the discount rate is of high importance. (See table 6.6). Most equity fund managers emphasize the application of the WACC in comparison to CAPM. Kotzegger (2001) argues that using the weighted average cost of capital is especially useful for companies with high leverage and firms with negative FCFE. This is in line with Feldman who suggests to discount operating cash flow using the WACC based on a cost of equity reflecting systematic risk for the specific industry the firm is in, and a credit risk model to determine the firm’s cost of debt.⁴⁹

6.2.3 Qualitative Business Valuation

Recall that qualitative business valuation examines the standing of the underlying business by evaluating the company from an interdisciplinary microeconomic perspective. This approach examines the economic condition, evaluating several key determinants for success, rather than focusing on the measurement of its financial performance. For instance Hamel and Prahalad (1989, pp. 63-76) emphasize management and corporate culture as major factors of future success.

⁴⁹ <http://www.bizownerhq.com>, 27.11.2002, S. Feldman, Chairman and Co-founder of Biz Owner HQ

Applying qualitative business valuation does not derive the numerical value of the business; rather it establishes the qualitative worth of the target firms. From our survey sample, it appears that qualitative business valuation is the most important approach corporate stock valuation. Table 6.7 below shows the importance of the qualitative business valuation as well as the most important factors when considering this approach in order to get a criterion for selection within a peer group.

Qualitative Business Valuation	Average	Scenario
Qualitative Business Valuation Approach: General	3,9	4,3
Financial situation	4,1	4,4
Share holder value policy	4,1	4,4
Sales development, future demand trends	4,0	4,3
Market share & distribution network	3,9	4,2
Competitive strategy	3,7	4,0
Market development	3,7	4,0
Customer orientation & service	3,6	3,9
Strategic planning	3,6	3,9

TABLE 6.7: Relative importance qualitative business valuation

The second column shows the average importance of the underlying key determinants when considering the whole sample. However qualitative business valuation has been assessed as extremely important by nine of the ten interviewed fund managers, whereas only one does not apply the approach at all. The third column shows a scenario, calculating the average importance of the factors under this approach, disregarding the out-runner. This leads to a remarkable increase in the weights of the factors making the followings “financial situation, share holder value policy, sales development and future demand trends, market share and distribution network” to be the most important factors considered in stock valuation and selection. The comments obtained from our survey outline the fact that this approach involves a lot of peer group analysis, since no numerical figure is considered.

In contradiction to the results obtained the theory of corporate stock valuation to a large extent disregards the qualitative business valuation approach. It rather focuses more on other valuation models, primary key ratios, DCF and technical analysis.

Why is such an important approach in business valuation disregarded by academic theory? Some of the studied fund managers remarked that qualitative assessment of a company is difficult since it necessitates examining a business from a broad area of economic subjects.

In order to evaluate a firm's complete strategy, innovation potential or technical flexibility for example, one has to have profound knowledge in the relevant economic fields. Most factors under qualitative business valuation come from an interdisciplinary micro economic perspective, and are commonly not finance related. However literature on business and stock valuation especially is to a large extent examined from a finance point of view and does not necessarily include factors belonging to qualitative business valuation (see table 4.1):

On the overall we suggest a holistic view when valuing a business, looking beyond the boundaries of financial analysis and valuing the target business from an interdisciplinary economic perspective. "A business, which is excellently managed from different face of economic outlook, will be profitable in the future. Qualitative business valuation appears suitable to achieve such a purpose."

6.2.4 Analysis of the geographical Region and Sector

We recall that as found out under 6.1.2, the analysis of the geographic location within Europe is less significant; the investor's interest is more shifted towards sectors and individual businesses. The obtained insignificances of the majority

of macroeconomic factors (see appendix 5.7), acknowledges this research conclusion. Table 6.8 below shows the most important factors in the frame geographical region and sector analysis.

Selection of the geographical region: general	Average
Trends	4,1
Selection of the sector: general	3,7
Development of sector compared to market index	3,7

TABLE 6.8: Relative importance geo region and sector analysis

As can be drawn from the table above, the only factors, which have a significant meaning in the frame of a top down analysis, are trends within Europe, the sector analysis in general, and the development of sector indexes relative to the market index. Call to mind that a possible way to look for profitable businesses includes identifying successful sectors. A quick way to recognize a profitable business involves looking at the movement of different indexes in relation to the general market index, the downwards or upward movements in the particular index alert the investor on the money he or she can make in a particular market segment. We also argue that trends within Europe are important since they disclose the direction where consumption and therefore corporate profits are going. In addition the analysis of a sector (within Europe) can be regarded as relevant since different market segments exhibit dissimilar returns.

6.2.5 Technical and Mood Indicators

Technical indicators: In addition to factors so far identified, we recognize in this section those very important technical indicators that guide our sample survey in their day-to-day ordinary shares selection. It should be noted that technical indicators are more used to time and feel the market than to analyse a particular company.

Technical analysis in general tells where the market has been and where it is going. It is concerned with the practice of forecasting future price movements

from the past history of the price and trading volumes, based on the premise that knowing where prices have been tells you where prices are going. It deals with questions such as: should I buy today? What will prices be tomorrow, next week, or next year? In answering these types of questions the results reveal that: *trend lines, support and resistance levels and chart formations* are the most relevant technical indicators within the frame of technical analysis. Table 6.9 below shows the relative importance of these indicators.

Technical Analysis	Average
Trend Analysis: General	3,6
Trend lines	3,8
Support and resistance levels	4,0
Chart formations	3,8

TABLE 6.9: Relative importance technical indicators

Steven B. Achelis⁵⁰ (2002) maintains, “In my experience, only a minority of technicians can consistently and accurately determine future prices.” Yet he does not ignore technical analysis as a prudent investment method when he says: “However, even if you are unable to accurately forecast prices, technical analysis can be used to consistently reduce your risks and improve your profits.” As can be drawn from table 6.9 our respondents regard trend analysis in general and to a large extent trend lines, support and resistance levels, as the most important instruments when the identifying the direction of the price development of the stock.

In this regard Achelis asserts: “You do not need to know what a security's price will be in the future to make money. Your goal should simply be to improve the odds of making profitable trades. Even if your analysis is as simple as determining the long-, intermediate-, and short-term trends of the security, you will have gained an edge that you would not have without technical analysis.”⁵⁰

Mood indicators: As mentioned in earlier chapters the stock market development is driven by the aggregate (re-) actions of individuals, based on

⁵⁰ [http://www.equis.com/Education/TAAZ/ 24 /11/2002](http://www.equis.com/Education/TAAZ/24/11/2002) Page=9, Steven B. Achelis “ Technical Analysis”

their persuasions and expectations. These re-actions are not independent from particular moods.

Thus considering that the emotions of market participants are connected to investment decisions, the determination of stock price based on expected earnings or the business climate will be a prudent approach. In this regard, knowing what a security should sell for is less important than knowing what other investors expect it to sell for. Analyzing a security's historical prices in an effort to determine probable future prices becomes irrelevant in this context. Yet this does not affect the argument from Achelis (2002) that technical analysis increases the odds making profitable trades. Table 6.10 below exhibits the most significant mood indicators.

Mood Indicators	Average
Business climate index	4,0
Expected earnings	4,0

TABLE 6.10: Relative importance mood indicators

6.2.6 Other Important Factors

This section presents those factors that fund managers considered important in stock valuation and selection processes that were not listed on the questionnaire. The header “others” in the questionnaire was provided to serve this purpose. Table 6.11 below shows those important factors.

Other important factors
Business honesty
Data and information
Capacity of fund team
Decision process for fund management

TABLE 6.11: Other important factors

The general apprehension is that business is full of lies, cheatings, and dishonest behaviour in order to increase returns. This opinion is strengthened by the fact that business people have very often made public ethical ideals in

their pursuit of private gain.⁵¹ According to the comments obtained the credibility of a business can be assessed by looking at what a particular company claimed on its quality and future success, and its final achievement over the long run. Moreover the respondents argue that the firm's managers are aware of the fact that no rational investors will put in funds into their business if claims have not been met. "Even in the short run assurances of honest dealing is often essential to profitability. Only by providing credible assurances of honest dealing can businesses turn potential customers into actual customers".⁵¹

From our point of the more credible a business is when making claims on its quality and future success, the more it will be able to attract investors. The issue of getting reliable data and information is to large extent limited by the capacity of the fund management team. Some fund managers maintain that pursuing primary research in the frame of company visitations is mainly limited by the capacity of the fund management team. Therefore they rely to a large extent on secondary information provided by analysts and brokers.

⁵¹ Lee, D., McKenzie, R. B. (Winter 1995), *Business and Society Review* no92 pp. 5-9, ISSN: 0045-3609

7 SUMMARY OF THE FINDINGS AND CONCLUSION

In this chapter, we outline the main empirical findings of our research and briefly summarize the study on mutual funds and corporate stock selections. The outlook of the theory had deeply been analysed, and understood from different alternative points of view. The conclusion calls to mind the problem and the objective of the study. Then we sum up the investigation of the theory as well as the results obtained from the analysis of our data.

7.1 Main Empirical Findings

This section outlines the main findings on common stock valuation and selection principles, applied by a sample of European equity fund managers:

- Stock valuation and selection methods are applied in combination.
- The main investment philosophy is directed towards achieving real or absolute, and towards outperforming the relevant benchmark index.
- Fund managers invest on average half-half value vs. growth stocks basis, however in short-term they shift more or less towards growth or value stocks depending on the particular market conditions.
- Regarding the time horizon, we found that long-term investors are more fundamentalists, whereas short-term investors apply either fundamental, technical, or a combination of these methods.
- The analysis of the geographical region is less significant, the focus is directed more towards individual companies and specific market segments.

-
- When valuing an ordinary share the application of key ratio analysis is a good starting point to assess whether a business is healthy.
 - Within the frame of DCF-analysis the FCF-WACC is the primary valuation model.
 - The assessment of qualitative business issues turned out to be of high significance when valuing an ordinary stock.
 - Trends and formations analysis are mainly used for market timing purposes, and to verify the results obtained in a fundamental business check.
 - There is no ‘best’ method for stock selection, intelligent investors should therefore define their own investment style, taking into consideration their investment objective, time horizon and risk tolerance.
 - The following factors and indicators turned out to be the most significant when selecting common stocks: the firm’s financial situation, shareholder value policy, business climate index, firm’s expected earnings, sales development and future demand trends.

7.2 Conclusions

We recall that the main objective of this study was to identify the stock valuation and selection systems applied by European equity fund managers when investing in common stocks, including exploring the rationale behind their choice as well as the relative importance and practical application of their valuation and selection systems.

In addition, we intended to examine the most significant micro- and macroeconomic factors as well as indicators when selecting an ordinary stock, and explore the reason behind the importance of these factors. Also we planned to determine the basic principles and concepts of corporate stock valuation with the aim to provide background and tools helpful to make prudent investment decisions. To achieve these research objectives, we set up questions in a coherent way that captured our stated goals.

As regards literature pertaining to the area of mutual funds and corporate stocks investment, we determined that investors classify stocks as growth or value; they frequently used two broad approaches to value and select stocks in order to build up a profitable portfolio. Basically they apply technical or fundamental valuation concepts. Technical analysis or Chartism is the practice of forecasting future stock prices from the past history of the price movements and trading volumes, based on the premise that knowing where prices have been tells you where prices are going. Fundamental analysis involves examining the underlying business of the firm in which the investor is considering investing in order to assess the worthiness of the underlying company rather than focusing on the share price in isolation. Quantitative analysis on the other hand requires the use of computers; mathematical modules and statistics to generate an objective stock valuation this method could be used as a first step in fundamental or technical analysis to limit the focus on a number of target firms within the same sector or industry for example. It could also be used in technical analysis to scientifically measure factors affecting investment decision-making or to study patterns available.

We argue that the methods and concepts of stock valuation available are so far applied together (combined) by European equity fund managers, however in different proportions from one manager to another. These methods will be more or less appropriate depending on several concerns including the business cycle, the investment strategy or investment objective of market participants. Therefore we maintain that a very good approach to make profitable operations

with common stocks includes designing a personal investment style, taking into consideration one's investment objective, time horizon and risk tolerance.

We additionally maintain that, it will be irrational for an intelligent investor to completely disregard concepts and methods belonging to one approach in favor of the other, no matter the situation. Even, the solely technicalist we got in our survey sample does not completely ignore aspects of fundamental business check. However an important step requires getting familiar with the literature relevant to corporate stock investment and to consider alternatives to invest in corporate stock as presented in table 5.1. Our analysis and results reveal that, both firm specific and market factors will affect the estimated or final value of an ordinary share.

The theory of market efficiency states that this value will change as new information becomes available. However, we argue that before reaching the state in which daily new information becomes very important, the investor decides first whether to buy, sell or hold the particular stock. To sum up, we maintain that even the most careful and detailed stock analysis will carry some degree of uncertainty about the final outcome.

8 RECOMMENDATIONS

The purpose of this section is to bring together the knowledge gained from the empirical and the theoretical study and provide recommendations on a possible approach to corporate stock selection. This section intends to make a contribution to the advancement of knowledge in area of corporate stock analysis, in theory and practice.

8.1 Corporate Stock selection

Objective of the approach: The presented model is one possible solution to exemplify how corporate stock analysis can be conducted when analysing European equities. It is developed for any individual, institution that is interested in this area of study. Figure 8.1 shows our approach.

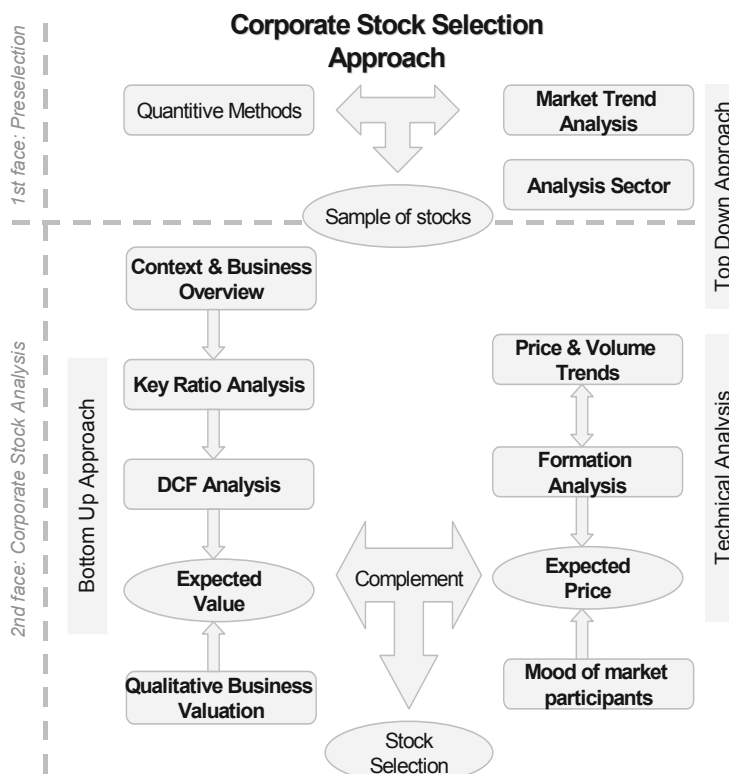


FIGURE 8.1: Corporate Stock Selection Approach ⁱ

ⁱ Created by the authors

Description of the approach: Our model presents a two-step approach of corporate stock selection. The first step ‘first face’ involves a significant reduction of the number of target shares.

This is done by using either quantitative methods or by performing a market trend and sector analysis (top down investment).

After having reduced the sample size the pre-selected shares are analyzed ‘second face’. Both a fundamental business check and chart analysis’s are performed simultaneously. The objective is to combine both concepts in a way that they complement each other. The first step within the bottom up approach is to understand the environment of the underlying business both externally and internally. Second a financial ratio analysis is performed with the objective of checking the financial condition of the considered business. Key ratio analysis is also a fit check for businesses. The third step is the valuation of the firm by applying the DCF method. The forecasted value is then supported and confirmed by the outcome of a qualitative business assessment.

As an alternative to the bottom up approach the investor can begin with technical analysis. The first step within chart analysis is to identify (price and volume) trends by applying instruments of trend or formation analysis. The estimated price movement is then balanced with the prevailing market behaviour. Solely, technical analysis is best used for market timing and trading purposes. Solely, fundamental analysis is best used to figure out the intrinsic value of the stock before comparing it with its market price. Put together, both methods leads to superior investment decision.

8.2 Qualitative Business Valuation

This is an interesting and practical concept of stock valuation and selection. The factors under this approach are useful tools to determine whether or not the investor is in quality stocks – quality business. In a selective market, it is important to keep track on those companies with unique features.

We suggest that researchers and business analysts emphasize more on quality business assessment. Also, the literature of corporate stock analysis should cross over the boundaries of financial economics to lay more emphasis on this valuation approach.



References

Books

Ansoff, H. I. (1965), Corporate Strategy, Mc Graw-Hill, New York

Bauer, R. J. Dahlquist, J. R. (1999), Technical Market Indicators: Analysis and Performance, Wiley and Sons, Inc.

Damodaran A. (2002), Investment Valuation: Tools and Techniques for Determining the Value of Any Asset, 2nd Edition

English J. R., (2002), Applied Equity Analysis: Stock Valuation Techniques for Wall Street Professionals, McGraw-Hill

Fisher, I. (1912), How to Invest When Prices are Rising, Scranton, Pa.: Lynn Summer and Co.

Fontanills, G. A. Gentile T. (2001), The Stock Market Course, John Wiley & Sons, Ltd

Fredman, J. and Wiles, Russ (1998), How Mutual Funds Work, New York Institute of Finance, Prentice Hall, Inc.

Greenwald B. C. N., Kahn J., Sonkin P. D., Van Biema M., (2002), Value Investing: From Graham to Buffett and Beyond, Wiley Ltd

Hamel, G. and Prahalad, C.K. (1994), Competing for the Future, Harvard Business School Press, Boston, MA

Kahn, Michael N. (1999), Technical Analysis Plain and Simple: Charting the Markets in your Language



Books (continued)

Keasy, K. Hudson, R. and Littler, K. (1998), The intelligent guide to Stock Market Investment, John Wiley & Sons Ltd England

R. Hudson, K. Keasy and M. Dempsey (1998), Share Prices under Tory and Labor Governments in the UK since 1945, Journal for Applied Financial Economics

Kotzegger, K. Individuelles Vermögensmanagement: Management von Aktienportefeuilles, Finanzberaterausbildung

Kretschmer, W. (2002), Finanzberaterausbildung: Portfoliotheorie

O'Shaughnessy, J. P. (1998), What works on the Wall Street: A Guide to the Best-Performing Investment Strategies of All Time

Penman, S.H. (2001), Financial Statement Analysis & Security Valuation, McGraw-Hill International Edition 2001, Finance Series

Porter, M. E. (1985), Competitive Advantage Creating and Sustaining Superior Performance, Free Press, New York

Radinger M. (2001), Workshop Fundamentalanalyse, Wirtschaftskammer Judenburg, June 2001

Ross, Westerfield, Jaffe, (2000), Corporate Finance, Fifth Edition, McGraw-Hill Int. Editions

Schwanfelder, W. (2000), Aktien für Fortgeschrittene: 56 maßgeschneiderte Strategien für Auswahl und Timing, Campus, Frankfurt/New York



Books (continued)

Siegel, J.J. (1998), Stocks for the Long Run: The definitive Guide to Financial Markets Return a Long-Term Investment Strategies, Second Edition, McGraw Hill, New York

Smith E. L. (1925), Common Stocks as Long-Term Investments, New York: Macmillan.

Spremann K. (2002), Finanzanalyse und Unternehmensbewertung, 2nd Edition IMF Oldenbourg Verlag München, Wien

Zweig M. (1990), Winning on Wall Street, New York: Warner Books, p.121

Journal Articles and Research Papers

Achelis, B. S. Technical Analysis, <http://www.equis.com/Education/TAAZ/>

Ball, R. (1972), Changes in Accounting Techniques and Stock Prices, The Journal of Accounting Research, Supp. 10

Brock, W. J. Lakonishok and Lebaron, J. (1992), Simple Technical Trading Rules and the Stochastic Properties of Stock Returns, The Journal of Finance, 47, 5

BZW Securities Limited, (1997) The BZW Equity-Gilt Study, 42nd Edition, January 1997

Ellis, C. D. (1975) The Loser's Game, Financial Analysts Journal, July/August

Fama, E. (1970), Efficient Capital Markets: A review of Theory & Empirical Work, Journal of Finance, 25 May



Journal Articles and Research Papers (continued)

Foster G., Olsen, C. and Shelvin T. (1984), Earning Releases, Anomalies, and the Behaviour of Security Returns, The Accounting Review, 59, October

Jensen, M. C. and Ruback, R. (1983), The Market for Corporate Control: The Scientific Evidence, Journal of Financial Economics, 11, April.

Lee, D. R.; McKenzie, R. B. (Winter 1995), Business and Society Review no92 p. 5-9 ISSN: 0045-3609 Number: BBPI95041840

Moon, P. and Bastes, K. (1993), CORE Analysis in Strategic Performance Appraisal, Management Accounting Research, 4

Kjellman, A. Granlund, M. (1998), What determines the value of a stock? A survey among Finnish Mutual Fund Managers, Research Project, Department of Economics, Åbo University

Lekvall P. and Wahlbin C., (1993), Information för marknadsföringsbeslut 3rd Edition, IHM Förlag, Göteborg

Internet Sources

<http://www.russell.com>, Frank Russel Company, 6/30/2001

<http://www.pathfinderscience.net>

<http://www.mutualfunds.about.com>

<http://www.comdirect.de>

<http://www.ameritrade.com/education/html/encyclopedia/index.html>

<http://mutualfunds.about.com/library/weekly/aa081501b.htm>



Internet Sources (continued)

http://pcpss2.rfc.ucl.ac.uk/mres/handouts/rm_lec8.pdf

<http://www.marketvector.com/data/index.htm>

<http://www.stoxx.com/indexes>

<http://www.fidelity.com>

<http://www.equis.com/Education/TAAZ/>

<http://www.wileyurope.com/cda/cover/0,,0471393150|excerpt,00.pdf>

http://www.ifo.de/pls/ifo_app/CESifoSwitch?setPage=/pls/ifo_app/

<http://www.cesifo.de/IfoInstitute>

<http://www.bizownerhq.com>

<http://www.globefund.com/centre/GettingStarted11.html>





Appendix 1- Search Strings

Appendix 2 – Cover Letter to Mutual Fund Managers per Email

Appendix 3 – Structured Questionnaire or Telephone Interview

Appendix 4 – Survey Results

Appendix 4.1 – Overall Stock Valuation Method

Appendix 4.2 – Time horizon, Investment strategy and approach

Appendix 4.3 – Investment Philosophy

Appendix 4.4 – Multiple Comparison Analysis

Appendix 4.5 – Discounted Cash Flow Analysis

Appendix 4.6 – Qualitative Business Valuation

Appendix 4.7 – Top Down Investment Approach

Appendix 4.8 – Technical Analysis

Appendix 4.9 – Other important factors

Appendix 5 – Corporate Stock Analysis as in the Literature



Appendix 2 – Cover Letter to Fund Managers in Email

FöreningsSparbanken ROBUR AB

Johan Heden

Per email: Johan.heden@robur.se
2002

Gothenburg, 17th of October

Interview

Dear Johan,

“Which systems of stock valuation are applied by European equity funds: Empirical Research on Austrian, British and Swedish mutual fund managers”
The objective of this research is to find out which systems of stock valuation and selection fund manager use in order to decide whether to buy, sell or hold a particular stock. In addition we intend to identify those micro- and macroeconomic factors that are extremely important when selecting an ordinary share. The data collection approach of this study involves a survey of Austrian, British and Swedish equity funds. This will be achieved through questionnaires or telephone interviews with the selected fund manager:

In this context we kindly invite you to reply to this survey either by email on the attached questionnaire, by fax, or within the frame of a telephone interview. While looking forward to hear from you we remain,

With friendly regards

Armand Collins Fotsing Moube and Michael Jannach

Graduate Business School
Handelshögskolan Göteborg

PS: This survey will remain anonym and all information is treated confidentially



Appendix 3 - Structured Telephone Interview or Questionnaire

How important are the following concepts when selecting an ordinary share?

	Percentage of appliance							
Fundamental Analysis	100%	80	60	50	40	20	10	0%
Technical Analysis	100%	80	60	50	40	20	10	0%
Quantitative	100%	80	60	50	40	20	10	0%

Provide reasons for your choice:

.....

Please quantify your time horizon, investment approach, and –strategy:

Time horizon	Percentage of appliance							
Short term (1 year or less)	100%	80	60	50	40	20	10	0%
Long term (more than 1 yr)	100%	80	60	50	40	20	10	0%
Investment strategy	Percentage of appliance							
Growth investing	100%	80	60	50	40	20	10	0%
Value investing	100%	80	60	50	40	20	10	0%
Investment approach	Percentage of appliance							
Top down investment	100%	80	60	50	40	20	10	0%
Bottom Up investment	100%	80	60	50	40	20	10	0%

Please highlight your investment philosophy:

I interested only in real returns

I expect my investment to beat the relevant market / benchmark index

It is sufficient if my stock investment just matches the benchmark index

I recognize that it is very hard to beat the relevant benchmark index

I prefer to play it safe and keep up with behavior of “blue chip” players

Other:



How important are the following factors, approaches when selecting a stock?

Bottom Up Approach		Importance					
Financial Ratios Analysis	Unimportant	1	2	3	4	5	Important
Current ratio & quick ratio		1	2	3	4	5	
Stock turnover ratio		1	2	3	4	5	
Debtor and creditor days		1	2	3	4	5	
Debt to Equity		1	2	3	4	5	
Interest cover		1	2	3	4	5	
Fixed assts intensively /coverage		1	2	3	4	5	
Return on equity		1	2	3	4	5	
Return on assets / investment		1	2	3	4	5	
PEG: Profit growth rate		1	2	3	4	5	
EPS: Earnings per share		1	2	3	4	5	
Price to revenue		1	2	3	4	5	
Price to book value		1	2	3	4	5	
P/E ratio		1	2	3	4	5	
Dividend per share		1	2	3	4	5	
Dividend yield & pay out ratio		1	2	3	4	5	
Discounted Cash Flow approach	Unimportant	1	2	3	4	5	Important
DDM: Dividend Discounted Model using CAPM		1	2	3	4	5	
FCFE: Free Cash Flow to Equity Model using CAPM		1	2	3	4	5	
FCFF: Free Cash Flow to Firm Model using WACC		1	2	3	4	5	
Qualitative business valuation approach	Unimportant	1	2	3	4	5	Important
Competitive strategy		1	2	3	4	5	
Market barriers & product substitutes		1	2	3	4	5	
R & D activity		1	2	3	4	5	
Technology & patents & know how		1	2	3	4	5	
Market share & distribution net		1	2	3	4	5	
Market & development		1	2	3	4	5	
Sales development, future demand trends		1	2	3	4	5	
Established brand		1	2	3	4	5	
Customer orientation & service		1	2	3	4	5	
Strategic planning		1	2	3	4	5	
Personnel policy & internal Training		1	2	3	4	5	
Value added chain of management		1	2	3	4	5	
Rationalization potential		1	2	3	4	5	



Technical equipment, flexibility & capacity		1	2	3	4	5	
Working Capital Management		1	2	3	4	5	
Share holder value policy		1	2	3	4	5	
Ownership structure		1	2	3	4	5	
Financial situation		1	2	3	4	5	

Other important factors:

Please rank the following factors, approaches according to your assessment of their practical importance:

Top down approach		Importance					
Selection geographic region: within Europe	Unimportant	1	2	3	4	5	Important
Current regional business cycle		1	2	3	4	5	
Exchange rates		1	2	3	4	5	
Interest rates & inflation & fiscal policy		1	2	3	4	5	
Political environment		1	2	3	4	5	
Technical & human infrastructure		1	2	3	4	5	
Unemployment rate		1	2	3	4	5	
Regional market liquidity		1	2	3	4	5	
Trends		1	2	3	4	5	
Development regional, important stock market		1	2	3	4	5	
General investment mood (bearish vs. bullish)		1	2	3	4	5	
Demographical development		1	2	3	4	5	
Selection of the sector:	Unimportant	1	2	3	4	5	Important
Development sector specific factors		1	2	3	4	5	
Relative development of sector index to mkt index		1	2	3	4	5	
Merger & Acquisition threats		1	2	3	4	5	
Demographical changes		1	2	3	4	5	
Technological changes		1	2	3	4	5	

Other important factors:

.....



Rank following indicators, approaches according to your assessment of their practical importance in corporate stock selection:

Technical Analysis	Unimportant	Importance					Important
		1	2	3	4	5	
Mood indicators							
Business climate index		1	2	3	4	5	
Put-call ratio		1	2	3	4	5	
Expected earnings		1	2	3	4	5	
Trend analysis							
Trend lines		1	2	3	4	5	
Trading bands or trend channels		1	2	3	4	5	
Simple & exponential moving average		1	2	3	4	5	
MAC-D		1	2	3	4	5	
Gaps		1	2	3	4	5	
Support & resistance levels		1	2	3	4	5	
Chart formations							
Turnaround formations		1	2	3	4	5	
Double top (M-Formation) and double down (W-formation)		1	2	3	4	5	
Shoulder-head-shoulder and reverse		1	2	3	4	5	
Cup with handle and reverse cup with handle		1	2	3	4	5	
Trend acknowledgement formation							
Rectangle & triangle		1	2	3	4	5	
Flag		1	2	3	4	5	
Other technical indicators							
Advance Decline Index		1	2	3	4	5	
Relative strength index		1	2	3	4	5	
Stochastic Indicator		1	2	3	4	5	
Timing indicator		1	2	3	4	5	
Oscillators		1	2	3	4	5	

Other important factors:

.....



Appendix 4 – Survey Results

Appendix 4.1 – Overall Stock Valuation and Selection Methods

Overall Valuation Method	Fund 1	2	3	4	5	6	7	8	9	10	1-10
Fundamental Analysis	40%	20%	33%	50%	60%	60%	80%	10%	60%	40%	45%
Technical Analysis	10%	60%	27%	25%	20%	40%	20%	80%	20%	20%	32%
Quantitative Methods	50%	20%	40%	25%	20%	0%	0%	10%	20%	40%	23%
Combination of Methods	Fund 1	2	3	4	5	6	7	8	9	10	1-10
Fundamental & Technical						1	1		1		30%
Fundamental, Technical Quantitative	1	1	1	1	1			1		1	70%

Appendix 4.2 – Time horizon, Investment strategy and –approach

Time horizon, Investment style Investment approach	Fund 1	2	3	4	5	6	7	8	9	10	1-10
Time horizon	---	---	---	---	---	---	---	---	---	---	---
Short term, less one year	80%	60%	100%	20%	20%	60%	10%	100%	100%	50%	60%
Long term, more than 1 year	20%	40%	0%	80%	80%	40%	90%	0%	0%	50%	40%
Investment style	---	---	---	---	---	---	---	---	---	---	---
Growth investing	50%	60%	50%	50%	20%	60%	n.R.	50%	50%	50%	49%
Value investing	50%	40%	50%	50%	80%	40%	n.R.	50%	50%	50%	51%
Investment approach	---	---	---	---	---	---	---	---	---	---	---
Top down investment	40%	60%	40%	60%	40%	80%	50%	n.R.	20%	20%	46%
Bottom Up investment	60%	40%	60%	40%	60%	20%	50%	n.R.	80%	80%	54%

Appendix 4.3 – Investment Philosophy

Investment philosophy	1	2	3	4	5	6	7	8	9	10	1-10
Interested only in absolute or real returns				1	1	1		1			40%
Interested only to beat the resp Index		1	1						1	1	40%
Interested in real returns & beat index	1						1				20%
I recognize that it is hard to beat the index		1				1					2

Appendix 4.4 – Key Ratio Analysis

Financial Ratio Analysis	1	2	3	4	5	6	7	8	9	10	1-10

· Legende: n.R. no response



Key ratio Analysis: General	4	n. R.	4	4	4	n. R.	4	n.R.	4	4	4,0
Short-Term Solvency: accounting liquidity	---	---	---	---	---	---	---	---	---	---	---
Current ratio & quick ratio	1	1	1	2	2	5	1	2,5	2	2	2,0
Activity	---	---	---	---	---	---	---	---	---	---	---
Debtor and creditor days	1	1	1	3	1	4	1	1	2	2	1,7
Stock turnover ratio	4	1	2	3	1	2	1	2	2	2	2,0
Fixed assts intensively /coverage	1	1	2	2	2	3	3	1	1	2	1,8
Financial leverage	---	---	---	---	---	---	---	---	---	---	---
Debt to Equity	3	5	4	4	4	4	4	2	2	4	3,6
Interest cover	1	3	4	3	4	5	3	1	3	3	3,0
Profitability	---	---	---	---	---	---	---	---	---	---	---
Return on Equity	4	4	5	4	5	4	5	3	3	2	3,9
ROA & ROI	4	3	4	4	5	4	3	1	4	2	3,4
Market ratios	---	---	---	---	---	---	---	---	---	---	---
EPS: Earnings per share	3	4	2	4	5	4	4	3	3	4	3,6
P/E ratio	4	5	2	4	3	4	4	3	4	4	3,7
PEG: Profit growth rate	5	4	3	3	5	2	4	1	4	4	3,5
Price to revenue	3	1	1	2	1	2	3	1	3	4	2,1
Dividend per share	2	2	1	2	1	4	1	1	1	2	1,7
Dividend yield and Pay out ratio	3	2	1	2	1	1	4	1	3	1	1,9
Price to book value	4	4	1	3	5	4	5	1	2	4	3,3

Appendix 4.5 – Discounted Cash Flow Analysis

Discounted Cash Flow	1	2	3	4	5	6	7	8	9	10	1-10
Discounted Cash Flow approach: General	3	n.R.	5	3	3	n.R.	2	1	5	5	3,4
DDM: Dividend Discounted Model CAPM	3	2	1	3	3	2	2	1	1	1	1,9
FCFE: Free Cash Flow to Equity CAPM	3	3	1	3	4	4	2	1	2	3	2,6
FCFF: Free Cash Flow to Firm Model WACC	3	5	5	3	4	4	2	1	5	5	3,7

Appendix 4.6 – Qualitative Business Valuation

Qualitative Business Valuation	1	2	3	4	5	6	7	8	9	10	1-10
Qualitative Business Valuation: General	5	n.R.	4	n.R.	4	n.R.	5	1	4	4	3,9
Competitive strategy	3	5	4	4	3	4	5	1	4	4	3,7
Market barriers & product substitutes	3	5	3	4	3	5	4	1	3	4	3,5
R & D activity	2	5	3	4	3	5	5	1	3	4	3,5
Technology & patents & know how	3	5	3	3	3	5	5	1	3	4	3,5
Market share & distribution network	4	5	3	4	5	5	5	1	5	2	3,9
Market & development	4	5	3	4	3	5	5	1	4	3	3,7



Sales development, demand trends	4	5	4	5	3	5	5	1	4	4	4,0
Established brand	2	5	4	3	4	4	3	1	4	2	3,2
Customer orientation & service	4	5	3	4	5	4	5	1	3	2	3,6
Strategic planning	4	5	3	2	5	4	5	1	4	3	3,6
Personnel policy & internal Training	1	5	2	2	1	3	4	1	1	1	2,1
Value added chain of management	5	5	3	4	5	3	5	1	3	1	3,5
Rationalization potential	5	4	3	3	1	1	4	1	3	3	2,8
Equipment, flexibility & capacity	3	3	3	3	1	3	2	1	2	2	2,3
Working Capital Management	2	2	4	4	5	3	5	1	4	4	3,4
Share holder value policy	5	5	5	4	5	4	5	1	3	4	4,1
Ownership structure	5	3	3	3	5	4	5	1	3	3	3,5
Financial situation	5	4	5	4	5	4	5	1	4	4	4,1

Appendix 4.7 – Top Down Investment Approach

Top Down Investment	1	2	3	4	5	6	7	8	9	10	1-10
Current regional business cycle	4	4	2	2	3	4	3	1	4	2	2,9
Exchange rates	3	2	2	2	3	3	3	1	2	1	2,2
Interest rates & Inflation	4	3	3	2	1	2	3	1	4	3	2,6
Political environment	3	4	3	2	1	2	n.R.	3	3	1	2,4
Technical & human infrastructure	2	3	2	2	1	4	2	1	2	1	2,0
Unemployment rate	2	3	2	3	1	2	1	1	3	2	2,0
Regional market liquidity	4	5	2	4	4	4	4	3	1	2	3,3
Trends	4	5	3	3	5	4	5	5	5	2	4,1
Development regional other imp stock markets	3	5	3	4	3	3	n.R.	1	2	2	2,9
General investment mood (bearish vs. bullish)	5	5	3	4	5	3	4	1	3	1	3,4
Demographical development	2	2	3	2	5	5	3	1	3	1	2,7
Selection of the sector:	5	n.R.	3	4	n.R.	n.R.	n.R.	1	4	5	3,7
Development of sector specific factors	5	2	3	4	3	3	n.R.	1	3	3	3,0
Development of sector to market index	5	5	3	3	3	5	n.R.	1	3	5	3,7
Merger & Acquisition treats	3	2	3	5	5	3	n.R.	1	4	3	3,2
Demographical changes	2	2	3	2	5	5	n.R.	1	3	1	2,7
Technological changes	4	4	3	3	5	5	n.R.	1	2	2	3,2

Appendix 4.8 – Technical Analysis

Technical Analysis	1	2	3	4	5	6	7	8	9	10	1-10
Business climate index	3	4	4	4	3	4	5	4	5	4	4,0
Put-call ratio	2	5	2	1	2	3	1	4	4	2	2,6
Expected earnings	5	4	3	4	5	3	4	4	4	4	4,0



Trend Analysis	4	5	3	3	5	4	n.R.	n.R.	2	3	3,6
Trend lines	4	5	4	3	4	4	4	5	2	3	3,8
Trading bands or trend channels	4	4	3	3	4	2	4	2	3	2	3,1
Simple, exponential moving average	3	5	3	3	n.R.	2	4	3	2	3	3,1
MAC-D	1	3	3	3	n.R.	2	4	4	2	3	2,8
Gaps	1	1	4	4	n.R.	4	1	1	4	4	2,7
Support & resistance levels	3	4	4	4	n.R.	5	4	5	3	4	4,0
Chart formations	2	3	4	4	4	4	4	5	n.R.	4	3,8
Turnaround formations	2	4	4	3	4	5	4	3	2	4	3,5
Double top M-and W-formation	2	4	4	4	5	5	4	2	2	3	3,5
Shoulder-head-shoulder & reverse	2	3	4	4	1	5	3	5	1	4	3,2
Cup with handle and reverse cup	2	2	3	3	1	5	3	5	1	2	2,7
Trend acknowledgement formation	2	5	3	3	4	4	1	n.R.	3	3	3,1
Rectangle & triangle	2	5	4	1	3	4	1	5	3	3	3,1
Flag	n.R.	5	4	1	1	3	1	n.R.	1	4	2,5
Technical Indicators	2	3	3	3	5	4	1	5	2	3	3,1
Advance Decline Index	3	5	3	3	4	4	1	3	2	2	3,0
Relative strength index	4	5	3	3	5	4	1	2	3	4	3,4
Stochastic Indicator	1	2	3	3	3	2	1	2	2	2	2,1
Oscillators	1	1	3	3	3	2	1	3	2	3	2,2

Appendix 4.9 – Other important factors

Other important factors	1	2	3	4	5	6	7	8	9	10
Business honesty	---	---	---	5	---	---	---	---	5	---
Important to get reliable information	5	---	---	---	---	---	5	---	5	---
Capacity of fund team	5	---	---	---	---	---	5	---	5	---
Clear decision process for fund management	---	---	---	---	---	---	---	---	---	---
Sharp ratio	5	---	---	---	---	---	---	---	---	---
Beta (bull and bear)	5	---	---	---	---	---	---	---	---	---
Liquidity of the stock	---	---	---	5	---	---	---	---	---	---
Current assets vs current liabilities	---	---	---	---	---	---	---	---	5	---
Capital Structure	---	---	---	---	---	---	---	---	5	---
FCF	---	---	---	---	---	5	---	---	5	---



Appendix 5 –Corporate Stock Analysis as in the Literature

Technical Analysis	
Charts	Line Charts
	Bar Charts
	Candlestick Charts
Trends Analysis	Trend lines
	Support & Resistance Levels
	Trading Bands
	Gaps
	Simple & Exponential Moving
	MAC-D
Chart Formation Analysis	Head and Shoulder
	Double Top and Double Down
	Cup with Handle and reverse
Trend Acknowledgement Analysis	Rectangle and Triangle
	Flags
Other Technical Indicators	Advance Decline Index
	Relative Strength Index
	Stochastic Indicator
Mood indicators	Business Climate Index
	Put- Call Ratio
	Expected Earnings
Fundamental Analysis	
Bottom Up	
Context	
Overview of the Financial	
Ratio and Analysis	
Evaluation	
Business Valuation Models	Asset Based Valuation
	DCF-Models
	Dividend Discount Model: DDM
	DCF to equity model using CAPM
	DCF to firm model using WACC
Qualitative Business Valuation	
Top Down	
Trend Analysis	
Analysis of the Geographical Region	
Analysis of the Sector	
Market timing	