

**ANALYSING THE MALTESE INVESTOR
BEHAVIOUR IN THE LOCAL EQUITY MARKET
DURING THE 1999 – 2002 PERIOD**

by

Alexander Mangion

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ABSTRACT

During the period 1999 – 2002, the Malta Stock Exchange witnessed its first bull and bear market in its short history. Behind every buy and/or sell order, there is an investor. Trade takes place because investors have different opinions and outlooks. Behavioural Finance theory analyzed in this dissertation, tries to identify the psychological characteristics that can drive an investor to trade on a market.

In the year 1999, the local stock market was getting the attention that had long eluded it and investors' optimism was at its maximum. The news media celebrated every market high achieved almost on a weekly basis and market participants believed that a new equity culture in Malta was developing. No bull run is forever. The enthusiasm turned into panic after March 2000. Some investors suffered big losses while others managed to cash their profits.

This dissertation tried to analyze if there were fundamental reasons to buy stocks in the bull market and to sell in the bear market. What is the view of investors towards stockbrokers and vice-versa? Analysing the behaviour of investors, financial advisors and authorities will help to understand the level of financial education needed so that past mistakes will be limited in the future.

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LIST OF ABBREVIATIONS

BOV	Bank of Valletta
DIV. YIELD	Dividend Yield
HSBC	Hong Kong and Shanghai Banking Corporation
LMB	Lombard Bank
MFSA	Malta Financial Services Authority
MLC	Maltacom plc
MSE	Malta Stock Exchange
MSE Index	Malta Stock Exchange Ordinary Share Index
MSI	Middle Sea Insurance plc
NAV	Net Present Value
P/E	Price on Earnings Ratios
P/BV	Price on Book Value
SFC	Simons Farsons Cisk

CHAPTER 1

INTRODUCTION, OBJECTIVES AND METHODOLOGY

1.1 INTRODUCTION

People invest to make money. Though their motivations – a bigger house, a better education for their children or a better retirement for themselves – may differ, their objectives do not. To achieve these objectives, the investor has a wide variety of products and services to choose from. He can deposit his savings in a bank account, buy shares or bonds on the stock exchange, or buy a life insurance policy or invest in a retirement plan account among other investment alternatives.

The Maltese investor also has these investment tools at his disposal. Some are traditional for him, like the bank deposits, while others are still in their early days, like the instruments listed on the Malta Stock Exchange. Bank depositors receive interest on their savings as a form of income. The stock exchange, for its part, pays no interest rate to its participants. Investors can earn an income either from dividends distributed by a company quoted on the stock exchange or by making capital gains when selling their investments at a higher price than when they bought it. This level of risk that guarantees no minimum income and may even generate a loss, may have kept some local investors away from this second option. Till 1999 the Maltese investor was still considered as conservative. But something caused this conservatism towards risk averseness to change into a risk

seekers mentality in a few months between the year 1999 and the first three months of the year 2000.

In the year 1999, a new record of trade volume in the equity market was registered on the Malta Stock Exchange. This was accompanied by a bull market. On 1st January 1999 the MSE index stood at 1215.587. One year later (by the 24th of January 2000) the index had risen by 230 percent to reach 4013.371. These gains had been nearly erased in the following 31 months when on the 24th July 2002 the index closed at 1875.302.

The Maltese investor had just witnessed the first bull and later bear market in the MSE's history. Some made a profit on their investment while others suffered a loss.

It seems that the newly converted risk seekers converted back to conservatives. The positive attitude that they had in the 1999 apparently turned into a negative one a few months later. This seemingly bad investment climate caused them to be more risk averse now than they were before. Will these investors return to the equity market in the future? Will they manage their risks better and play the market in a better way than they did?

1.2 OBJECTIVES

The objectives for this dissertation were to analyse and answer the following questions:

- What caused the Maltese Investor to rush to the market in the year 1999 and beginning of year 2000?
- Were there fundamental reasons why Maltese investors reacted in the way that they did over the survey period?
- Was the Maltese Investor behaviour rational? Or were they just herding or being over confident of the market?
- What was the role of financial services providers in this behaviour?
- Does the Maltese Investor still believe in the market?
- Can anything be done so past mistakes will not be repeated? If yes, what is being done and what more can be done?

In answering these questions, one can have a picture of Maltese Investor behaviour when deciding to buy or sell a particular share. There is some rationale behind every buy or sell move. Is this reason based on facts, technical reasons or psychological reasons? In analysing these attitudes and actions one can attempt to forecast future movements on the MSE when new important news are issued regarding companies listed on the stock exchange.

1.3 METHODOLOGY EMPLOYED

This research was carried out in two different mode and stages. The first part was to analyse the behaviour of the Maltese investor during the bull and bear market. This was carried out by going through important news and by analysing other fundamental data that was available to the investor during that period. The former was accompanied by analyzing the volatility of the volume levels in the equity market on the Malta Stock Exchange. Trading on the bond market was omitted in this research. The analysis included also the affect that new collective investment schemes and the listing of new companies on the Malta Stock Exchange had.

The second part dealt with two questionnaires distributed to a number of stockbroking firms and to the general investor to analyse the behaviour and attitudes that the Maltese Investor had and has towards the MSE.

Statistical data was collected from the Investment Unit at the Malta Financial Services Authority. Financial news were scrutinised from local business newspaper issued during the 1999 – 2002 period. Several annual reports from local fund management companies and other institutions such as the Malta Stock Exchange were also being consulted.

1.4 ASSUMPTIONS USED AND LIMITATIONS OF THE REPORT

One important assumption in this research was that the general public survey was not statistically relevant and significant. This assumption was important as names and addresses of investors in the local stock market cannot be provided by the MSE for confidentiality reasons.

The analysis analysed in chapter three ignored the effects of transaction costs, taxation and inflation. This assumption helped as transaction costs can vary with different financial providers. So evaluation of different instruments available on the market can be better explained. Another assumption was that the data analysed was based on earnings and dividends declared by firms that can be subject to manipulation. In order to compare the dividend yields and profit on earning ratios, it was assumed that the earnings and dividends provided were for the 12-month period starting from January to December.

In the research process it was also assumed that the opinions expressed by stockbrokers and investors in the survey were to the best of their knowledge.

In the second chapter, theory on behavioural finance was discussed with the intention of comparing it with the research results produced in this report.

CHAPTER 2

AN OVERVIEW OF INVESTOR BEHAVIOUR PROVIDED BY BEHAVIOURAL FINANCE THEORY

2.1 INVESTORS' BEHAVIOUR TOWARDS FUNDAMENTAL ANALYSIS

Fundamental analysis seeks the difference between the intrinsic and the market value of a share. Intrinsic value is the actual value that one believes a stock to have, regardless of what it is being bought and sold for on the market. Investors can use a wide array of economic, industry and corporate information to calculate the corporate 'intrinsic value'. These include its assets, earnings, products, markets, competition, and management.

2.1.1 NEWS REACTION

News regarding the companies listed on the stock exchange is issued regularly. There are two ways that investors can weight the importance of the news. They can either under-react or over-react.

2.1.1.1 UNDER REACTION

The under reaction evidence studied by Cutler, Poterba, and Summers (1991)¹ shows that over horizons of perhaps one to twelve months, security prices under react to news. As a consequence, news is incorporated only slowly into prices,

¹ *A Model of Investor Sentiment* - Nicholas Barberis, Andrei Shleifer, and Robert Vishny. Pages 4 - 5.

which tend to exhibit positive autocorrelations over these horizons. A related way to make this point is to say that current good news has power in predicting positive returns in the future.

2.1.1.2 OVER REACTION

The over reaction evidence studied by Lakonishok, Shleifer, and Vishny (1994)², shows that over longer horizons of perhaps three to five years, security prices overreact to consistent patterns of news pointing in the same direction. That is, securities that have had a long record of good news tend to become over-priced and have low average returns afterwards.

Trading volume increases when price takers, insiders, or market makers are overconfident. This is the most robust effect of overconfidence. Conservatism leads to under-reaction while representative-ness leads to overreaction.

2.2 INVESTOR MENTALITY

Not every choice an investor makes is in his best interests. While emotions such as fear and greed often play a pivotal role in poor decisions, there are other causes of irrational behaviour. Common mental mistakes sometimes lead people to incorrectly process new information about a company and, in turn, misjudge a stock's true value.

² *A Model of Investor Sentiment* - Nicholas Barberis, Andrei Shleifer, and Robert Vishny. Pages 7 – 8.

2.2.1 PROSPECT THEORY

Kahneman and Tversky (1979)³ introduced a new class of utility evaluation where investors weight losses more heavily than gains. Psychological studies have repeatedly demonstrated that the pain of losing money from investments is nearly three times greater than the joy of earning money. Investors often have more trouble selling than buying. If a stock is heading up, investors wait, hoping to increase their gains. If it is heading down, investors wait too, hoping to recoup their losses. Of the two, the latter is the bigger problem. This suggests investors do not prefer to “cut their losses”.

2.2.2 HERDING AND TREND CHASING

In markets with a diversity of participants, such as the share market, the prices of securities are likely to reflect the expected returns and risk preferences of individual investors. But this does not mean that an investor’s decision will always be made objectively.

Herd behaviour has frequently been highlighted in financial markets and it shows that investors can be influenced by the actions of others. Investors may trade on noise (caused by the actions of others) as if it were information. This encourages investors to trade more frequently than would otherwise be the case. Investors and analysts have extrapolative expectations about prices and firm

³ *Investor Behaviour and Asset Prices* - Pantisa Pavabutr. Page 3

earnings. Analysts tend to overestimate (underestimate) firms that have strong (weak) earnings performance in the past few years.

According to Peter Bernstein: *“While it is important to understand that the market doesn’t work the way classical models think – there is a lot of evidence of herding, the behavioural finance concept of investors irrationally following the same course of action.”*⁴

Herd behaviour leads to extreme outcomes, first on the upside and then on the downside as confidence turns to panic. Fundamentals are forgotten and markets become extremely ‘overbought’ or ‘oversold’.

2.2.3 POSITIVE FEEDBACK TRADING

Positive Feedback trading refers to a trading strategy in which investors buy after prices rise and sell after prices fall. This type of trading can result from herding, analytical expectations, or liquidation to meet margin calls. Investors tend to become more optimistic when the market goes up and more pessimistic when the market goes down. Hence, prices fall too much on bad news and rise too much on good news.

⁴ <http://www.deanlebaron.com/book/ultimate/chapters/invpsy.html>

2.2.4 ANCHORING EFFECT

Via general market observations, it appears that there is evidence of the anchoring effect of past prices. Anchoring may explain why stock prices, market indices, and financial ratios become sticky around certain levels.

In certain circumstances news may weaken the current anchor, which may explain why some studies have found that markets over-react or under-react on particular occasions (e.g., significant price changes around profit or dividend announcements).

2.2.5 REGRET THEORY

Regret theory is about people's emotional reaction of having made an error of judgment, whether buying a stock that has gone down or not buying one they considered and which has subsequently gone up. Investors may avoid selling stocks that have gone down in order to avoid the regret of having made a bad investment and the embarrassment of reporting the loss. They may also find it easier to follow the crowd and buy a popular stock: if it subsequently goes down, it can be rationalized as everyone else owned it.

The possible fear of regret is a factor driving some investors' behaviour. This factor is most likely to dominate where investors are not confident of their information, or ability to process it. Investors may use investment advisers as scapegoats thereby reducing their responsibility for poor investment decisions.

Investors faced with the decision to sell an investment are affected by whether the security was bought for more or less than the current price. Goetzmann & Peles (1993)⁵, observed that money flows in more rapidly to mutual funds that have performed extremely well than flows out from mutual funds that have performed extremely poorly, suggest that investors, in losing funds, are unwilling to confront the evidence that they made a bad investment by selling their investments. In some instances investors may even be prompted to take risky bets to try and break even, and so save face. Reporting of losses often appears to be the source of much embarrassment.

2.2.6 INTRINSIC MOTIVATORS

Investors are not solely motivated by the maximisation of expected returns. There may well be intrinsic rewards associated with an investment. For example, an investment may provide an investor with the opportunity to fulfil a long held desire to be involved in the banking industry, or to own a piece of a Hotel chain.

2.2.7 TIME HORIZONS

In a rising market, investors have long time horizons; they are not only thinking of the future, they are willing to plan for the future. They look at their investment returns over three-, five- and even ten-year periods of time. Conversely, in a declining market, investors shorten their time horizons dramatically.

⁵ <http://www.sec-com.govt.nz/publications/documents/behaviour.shtml>

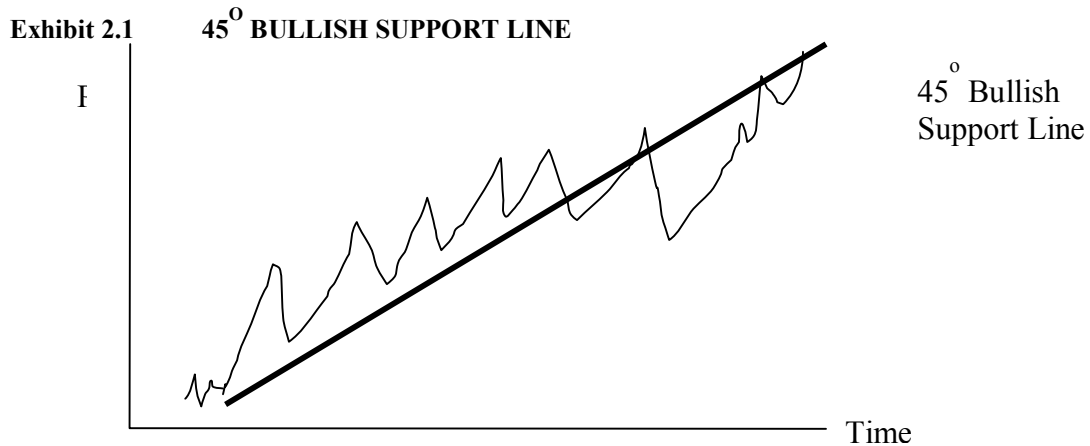
2.3 INVESTOR BEHAVIOUR TOWARDS TECHNICAL ANALYSIS

No matter how terrific a stock is, it will not rise in price unless someone wants it badly enough to pay more for it than the present price. That's the law of supply and demand, and it controls prices on every open market. Technical analysts believe that the stock price and other measures such as volume behave in patterns that can then be used to anticipate future price directions.

2.3.1 TRENDS

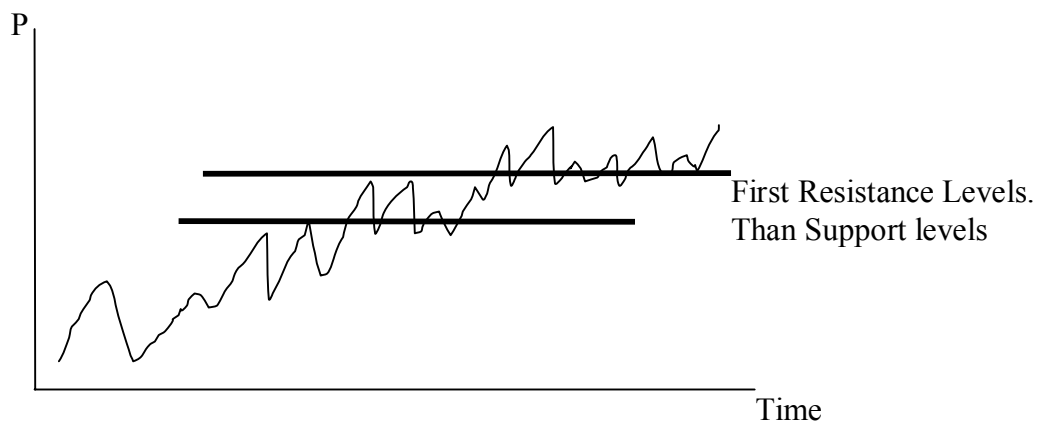
The single most important concept in technical analysis is the identification of trend. A technical analyst works on the basic principle that an established trend is more likely to continue than reverse.

To see if a stock is in an overall uptrend, one must look at the Bullish Support Line. This line is drawn from just below a stock's apparent 'bottoming-out' point, upward to the right at a 45 degree angle. If a stock is trading above this bullish support line, it is considered to be in an overall uptrend and a buying signal is assigned to it.



According to Elli Gifford⁶, technicians call the price area where falls are arrested, ‘support’ and the region where the rallies reverse, ‘resistance’ (exhibit 2.2). The identification of resistance and support lines causes trends to form. In an upward market condition once the resistance level is overcome, it then becomes as the new support level. In a declining market the support level will turn to resistance as the support level is infringed.

Exhibit 2.2 **RESISTANCE AND SUPPORT LEVELS**



2.4 COLLECTIVE INVESTMENT SCHEMES

According to Bloomberg University, collective investment schemes, or as sometimes referred mutual funds or open-ended investment companies (OEICs),

⁶ *The Investor Guide to Technical Analysis. Predicting Price Action in the Market.* - Elli Gifford.

can be defined as “*an investment cooperative managed by an investment company. As in other cooperatives, (such as credit unions), mutual fund investors pool their assets together and employ an investment company with investment professionals and administrators who conduct the day-to-day business of managing the fund.*”⁷

CIS help investors to reduce investment costs and are provided with professional investment management. CIS also enable investors with small- and medium-sized portfolios to diversify in an efficient manner.

Passage of time and appropriate investment horizons are critical for collective investment schemes because of the entry hurdle for buying equity funds. Typically, investors will pay 3-4 per cent upfront fees. Charges include bid/ask spreads and annual management fees.

CIS investors adopting the right set of expectations, the right time horizons, and picking the appropriate fund managers have a better chance of having satisfactory returns.

A study by Dalbar (2001), titled “*The Quantitative Analysis of Investor Behaviour*”⁸, has shown that the average Canadian investor is not earning the level of mutual fund returns advertised by the fund companies. The main reason

⁷ <http://www.bloomberg.com/analysis/univ/tutorial/investing101/lesson5.html>

⁸ http://www.dalbar.ca/consumers_QA_of_IB.html

derived by this study is that attempts to time the market do not pay off for the typical investor. Investors normally walk out early from the market. Consumers stand to gain more by maintaining a buy-and-hold strategy.

CIS's have one main drawback: unlike taxes on individual investments, the tax (in UK corporation tax vary from 0% to 30% depending on profit levels and is liable on unit trusts only) applies to all the funds earnings, even if the investor has not sold his shares. Selling of shares/units can cause a capital gain (in the UK any capital gain above the annual exemption limit of £7,900 per person is subject to the capital gains tax.).

2.5 RISK

Sterling Mutuals Inc, a mutual fund company in the US, states how risk can be defined in different ways: *“Some might define risk as the chance of outliving their portfolio (i.e. failing to meet their stated objectives); others as suffering a permanent impairment of value; yet others might simply consider risk to be nothing more than the frequency and magnitude of declines in value.”*⁹

No investment strategy can eliminate risk. There are two categories of risks in investments. These are Systematic Risks and Non-Systematic Risks.

⁹ http://www.sterlingmutuals.com/Research/Weekly/Telus_Risk_06sep2002.htm

2.5.1 SYSTEMATIC RISKS

Systematic risks are risk factors inherent to one degree or another in all investment markets. An investor has no control on systematic risks and he cannot diversify against them. Systematic risks include Inflation risk, Tax risk, Interest Rate risk and Market risk.

- Inflation Risk is the risk that inflation will make the money returned more or less valuable than the money invested.
- Tax Risk is the risk that the government will alter the tax structure in some way that will make the investments more or less valuable.
- Interest Rate Risk is the risk that the Central Bank will increase or decrease interest rates.
- Market Risk is the risk that the market as a whole will respond emotionally to newsworthy developments more favourably or less favourably than anticipated.

2.5.2 NON-SYSTEMATIC RISKS

Non-systematic risks are risks that are inherent in all investment market-place. These are risks that are largely controllable and include business risk, financial risk, and volatility.

- Business risk is the risk that an individual investment that is held by the investor will perform better or worse than the market as a whole. Business risk is controllable by analysing the managers and 'investment worthiness' of the investments holdings.

- Financial risk is the risk that one may experience a change in his personal financial situation that may alter his investment objectives and ability to invest. Financial risk has nothing to do with the investments per se; it has to do with the investor. The investor should invest when he can afford to invest.
- Volatility is the risk that the investor may have to liquidate an investment at a low point on a normal market cycle for some personal reason and won't be able to wait until the cycle turns. The markets all go up and down and they will be volatile to varying extents.

It may seem that many investors, and their advisers, did not understand the risks they were taking when the market was overheated. Hopefully, if investors stick to their investment plans and resist the urge to abandon their shares completely, they won't make the same mistakes next time.

Whether individuals accept a particular investment and how much they are willing to pay for that investment will be influenced by their risk preferences. Losses that can be quickly recovered through new income may temper the significance an investor places on a possible decrease in wealth. The converse of this logic may explain why investors who have retired from paid work often appear to be strongly risk averse.

Investment theory suggests that risks can be generally reduced by diversification, because the returns of some investments are inversely related to those of other investments for certain risks. Yet evidence suggests that investors are not highly diversified. In many countries, despite an increasingly global economy, most investors still overwhelmingly hold assets in their home economy. Transaction and monitoring costs may suggest domestic investing is cheaper, but technology and specialist financial intermediaries are increasingly eroding these costs. It seems likely that other factors, such as risk aversion, must also explain why home investments persistently dominate portfolios.

2.6 BUBBLE BLOW AND CRASHES

Kindleberger¹⁰ while analysing the history of financial crises argues that there is a consistent pattern to financial manias and panics which can be controlled or moderated. He spells out the following stages of the credit cycle of boom and bust:

- The upswing usually starts with an opportunity - new markets, new technologies or some dramatic political change - and investors looking for good returns.
- It proceeds through the euphoria of rising prices, particularly of assets, while an expansion of credit inflates the bubble.
- In the manic phase, investors scramble to get out of money and into illiquid things such as stocks, bonds, or real estate: a large group of

¹⁰ *Manias, Panics and Crashes: A History of Financial Crises* - Charles Kindleberger.

people seeks to become rich without a real understanding of the processes involved.

- Ultimately, the markets stop rising and people who have borrowed heavily find themselves overstretched. This is 'distress', which generates unexpected failures, followed by 'revulsion' or 'discredit'.
- The final phase is a self-feeding panic, where the bubble bursts. People of wealth and credit scramble to unload whatever they have bought at greater and greater losses and cash becomes the most important asset.

Marc Faber¹¹, in a report titled “*The Gloom, Boom and Doom Report*” states that in every equity mania, cash is regarded as a totally unattractive investment alternative.

2.7 THE INITIAL PUBLIC OFFERING (IPO)

One of the most seemingly attractive areas of investment is that of initial public offerings (IPOs). Buying shares the first time they are offered to the public has considerable natural appeal, especially in a bull market, tempting investors with potentially phenomenal short-term returns as well as exposure to exciting new companies and industries.

Some investors make up their mind about investing in an initial public offering even before the offer documents (investment statement and prospectus) are

¹¹ *The Gloom, Boom and Doom Report* - Marc Faber.

available. Investors may be affected by deliberate ‘data mining’. Data mining refers to the practice of presenting or manipulating data in such a way as to encourage a misleading interpretation. The volatility of initial public offerings may be partly explained by a lack of an anchor.

One must be aware that not all IPOs have a successful performance on the stock market. According to a report by Tim Loughran and Jay Ritter¹² a study of the US market reveals that of nearly 5,000 IPOs initiated between May 1988 and July 1998, nearly a third no longer trade their stock and 44% sell at a market price below their original offering price. So investors must always show great caution, being careful to study the prospectus, balance sheet and profit and loss account of any potential investment.

2.8 INVESTOR'S PRIDE

Pride has often been highlighted as an explanation of investor behaviour. A number of studies like that of Bernstein (1996)¹³ have found people are generally highly confident in their intuitive judgement, which leaves them susceptible to illusions and poor judgement. There is evidence that investors often think their choices are based on superior information without even knowing what information is available to the counter-party to their trade.

¹² *The New Issues Puzzle*, Journal of Finance, March 1995 - Tim Loughran and Jay Ritter.

¹³ *Against the Gods: The Remarkable Story of Risk* - Bernstein, P. (John Wiley & Sons Inc.)

The same studies suggest investors are more likely to hold securities they have touched or personally selected. The frequency level with which investors trade can also be explained by pride factors. In this regard the investor takes pride from being seen as playing the share market.

2.9 INVESTOR OBJECTIVES

To help avoid mistakes, an investor should always establish his expectations before entering a trade. His expectations should be based on two sets of factors: personal and technical. Personal factors include how much the investor wants to gain and how much he is ready to lose, based on his level of assets, investing goals, and timeframe. Technical factors take account of where the investor expects the stock price to go and where it should not go (example: below the bullish support line).

The existence of bubbles and crashes can be a clear proof that investors have irrational behaviour, not rational ones. This indicates that when one tries to analyze the investor attitudes and actions in any stock market, the psychology of the investor towards the market is involved. Some theories like the regret theory, prospect theory, herding and positive feedback trading effects, news reactions, anchoring effect and the investors' pride and objectives all play part in the decision making of when to buy or sell a stock on the market.

In the next chapter, the behaviour of the Maltese investor during the three years from 1999 till 2002 was analyzed in response to financial news and financial data available to them during this period.

CHAPTER 3

AN ANALYTICAL COMMENTARY OF THE TRADING LEVELS ON THE MALTA STOCK EXCHANGE 1999–2002

3.1 THE VOLATILITY OF THE MSE INDEX AND TRADING LEVELS

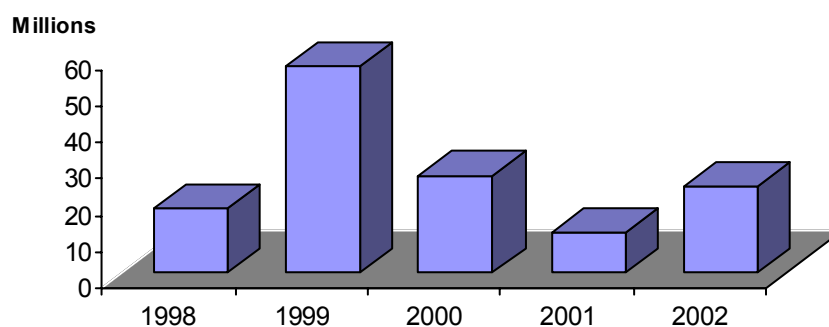
In the last five years, the Malta Stock Exchange has seen a lot of activity both in the number of units traded and also in its stock market index. The Malta Stock Exchange (MSE) made headline news in 1999 when for the first time in its brief history the MSE Share Index (MSE Index) gained more than 2000 points representing a 176.46% increase on the 1998 end-of-year share index. Tables 3.1 and 3.2 give an indication on how volatile the stock market index was and the number of units traded on the MSE between the year 1999 and 2002.

Table 3.1 TOTAL NUMBER OF UNITS TRADED ON THE MSE DURING 1998 – 2002 PERIOD

Year	Units traded on the local stock market	% change
1998	17,268,788	
1999	56,305,236	+ 226.05
2000	26,409,348	- 53.10
2001	10,796,452	- 59.12
2002	23,311,666	+ 115.92

Source: Malta Stock Exchange Annual Reports 1999 - 2002

Exhibit 3.1 NUMBER OF UNITS TRADED ON THE MSE 1998 - 2002



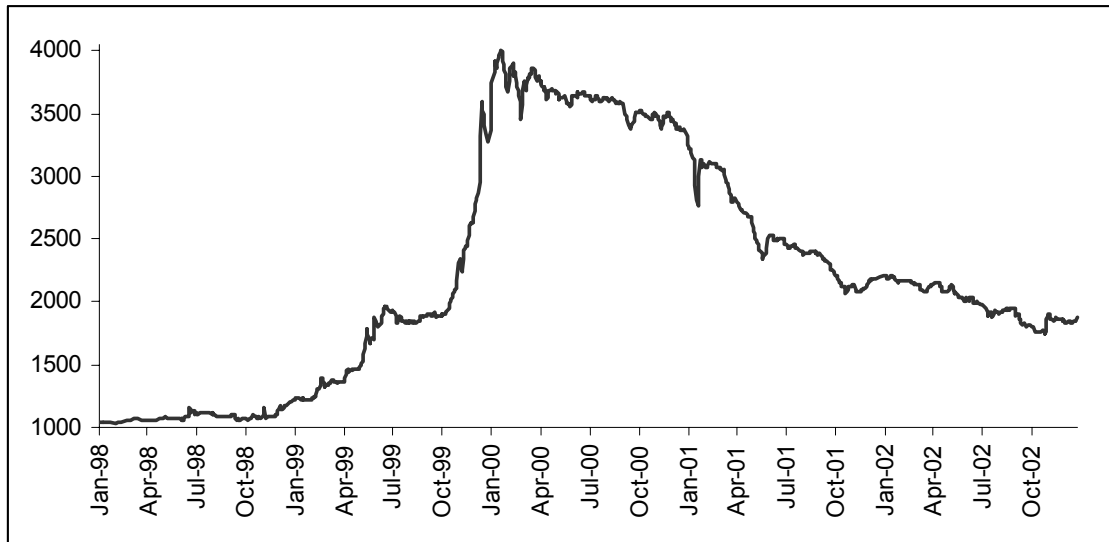
Source: Malta Stock Exchange Annual Reports 1999 - 2002

Table 3.2 MALTA STOCK EXCHANGE INDEX 1999 - 2002

Date	MSE Index Value	% Change	% Yearly Change
4 th Jan 1999	1215.587		
5 th April 1999	1365.795	+ 12.36	
1 st July 1999	1914.318	+ 40.16	
1 st Oct 1999	1888.568	- 1.35	
4 th Jan 2000	3359.035	+ 77.86	+ 176.46
3 rd April 2000	3800.536	+ 13.13	
3 rd July 2000	3645.357	- 4.08	
2 nd Oct 2000	3516.784	- 3.54	
3 rd Jan 2001	3316.364	- 5.69	- 1.28
2 nd Apr 2001	2828.509	- 14.72	
2 nd July 2001	2500.096	- 11.60	
1 st Oct 2001	2252.858	- 9.92	
3 rd Jan 2002	2207.445	- 2.00	- 33.44
1 st Apr 2002	2125.704	- 3.72	
1 st July 2002	1989.299	- 6.40	
1 st Oct 2002	1812.602	- 8.90	
3 rd Jan 2003	1874.764	+ 3.42	- 15.09

Source: Malta Stock Exchange website www.borzamalta.com.mt

Exhibit 3.2 MSE INDEX 1998 - 2002



Source: Malta Stock Exchange website www.borzamalta.com.mt

On the basis of these tables, it seems that the Maltese investor may have behaved irrationally during this period. Units traded levels in this period indicate that the Maltese investor got carried by the mania of the year 1999, but then found it difficult to pull out of the market, resulting in a financial loss. This statement was reflected in table 3.1 as trading peaked in 1999 and then halved in the following two years respectively. This lends credence to the prospect theory of Kahneman and Tversky (1979, *ibid*) which states that investors do not prefer to cut their losses.

The sudden increase in the stock index in the 1999 can be divided into two parts: the first part being April – July (+40.16 %) and the second part during October – January (+77.86 %). In the following section of this chapter some fundamental analyses that had caused the investors to behave in such way has been presented.

3.2 FUNDAMENTAL ANALYSIS 1999 – 2000

3.2.1 APRIL – JULY 1999

The April – July increase in the Malta Stock Exchange Index (MSE Index) can be partly attributed to the rumour (later confirmed as news), of the acquisition of Mid-Med Bank by Midland (later named as HSBC). The newspaper ‘The Malta Business Weekly’ reported this take-over offer, on the 15th April. The report¹⁴ stated that Midland was purchasing Mid-Med Bank for Lm83 million. This represented a price per share of Lm2.90, a premium of 69 cents over the average price at which the shares have traded over the previous six months and 90 cents over a 12-month period.

This news was accompanied by other positive news issued by companies quoted on the MSE that showed better than expected results for their financial year. These include Maltacom plc, Bank of Valletta and Lombard Bank. Maltacom plc’s chairman¹⁵ had revealed that his company’s financial results would be better than expected. Meanwhile the Bank of Valletta Group had reported¹⁶ an increase of 7.5 per cent over the operating profit registered in March 1998. Lombard Bank also reported an increase of 6 per cent over the pre-tax profit figure compared to the corresponding period of the year before.¹⁷

¹⁴ The Malta Business Weekly 15 – 21 April 1999, Issue No.234, Pg 1, ‘Midland Buys Mid-Med for LM83m’

¹⁵ The Malta Business Weekly 29 April – 5 May 1999, Issue No.236, Pg 7, ‘Maltacom’s Financial Results to be ‘better than expected’’

¹⁶ The Malta Business Weekly 6 - 12 May 1999, Issue No.237, Pg 2, ‘BOV Group announces half yearly results’

¹⁷ The Malta Business Weekly 20 - 26 May 1999, Issue No.239, Pg 2, ‘Lombard Bank announces 6% increase in profits’

When the Mid-Med Bank shares resumed trading on 2nd June 1999, after a two month suspension because of the take-over offer by Midland, these registered a 40.22 % increase in their price (Lm2.71 – Lm 3.80). This percentage was nearly equal to the increase in the MSE index during the period April - July of 40.16 %.

3.2.2 OCTOBER 1999 – JANUARY 2000

The next above normal performance of the stock index in 1999 was in the period October to January. Investors were influenced by two important news items. These were the possible new strategic partner for Maltacom by the Swedish telecom firm Ericsson and the presentation of the White Paper entitled "Privatisation: a strategy for the future" presented in the Budget speech for the year 2000. The rumour about the Maltacom's new strategic partner recorded a record number of deals (96 deals) in a single day, resulting in an increase in the share price of around 13 per cent.¹⁸ In the Budget speech for the year 2000, the Minister of Finance indicated five government entities that would be privatised in the following months. These were the Malta International Airport, the Malta Freeport Terminal, the Public Lotto, Bank of Valletta and the Libyan Arab Maltese Holding Company.¹⁹

The fine performance of the Mid-Med Bank shares after the take-over of Midland had caused the investors to over-react to the news that more companies

¹⁸ The Malta Business Weekly 18 – 24 November 1999, Issue No.265, Pg 1, 'Record trading of Maltacom Shares'

¹⁹ The Malta Business Weekly 25 November – 1 December 1999, Issue No.266, Pg 5, 'Five companies earmarked by government for privatisation'

were going to be privatised. It seems that the Maltese investor wanted to take part in the next privatisation process which could have generated a high rate of return on their investments. This sentiment of the Maltese investor had caused the equity market to reach its highest levels in its 12 years of history. The peak of this bull market was reached on the 24th January 2000 when the index read 4013.371: an impressive increase of 230 per cent in 52 weeks. Table 3.3 and Exhibit 3.3 show the number of units traded during the year 1999.

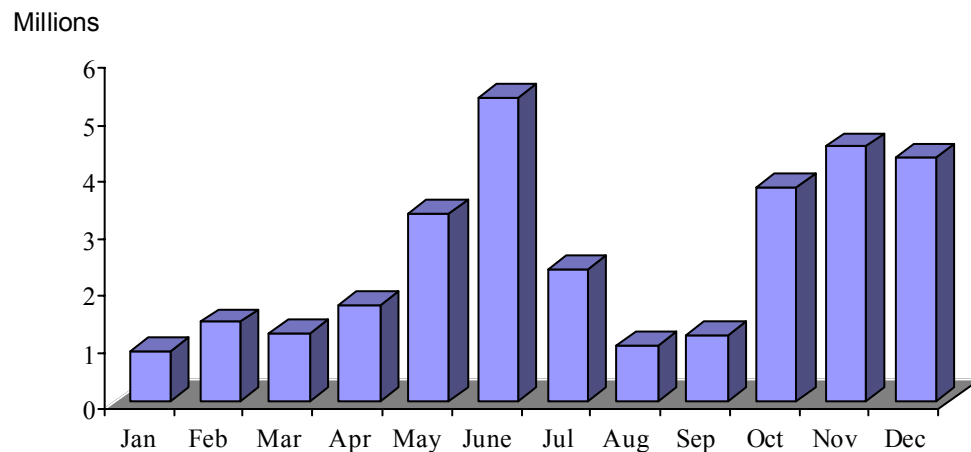
Table 3.3 NUMBER OF UNITS TRADED ON THE MSE IN THE YEAR 1999

Month	Units Traded	Month	Units Traded
January	881,610	July	2,317,609
February	1,386,368	August	977,790
March	1,196,573	September	1,161,029
April	1,698,493	October	3,750,605
May	3,296,795	November	4,472,246
June	5,338,285 [‡]	December	4,280,468

Source: Malta Stock Exchange Monthly Reports Jan 1999 – Jan 2000

[‡] Excluding 25,547,455 from Midland's take-over

Exhibit 3.3 A GRAPHICAL VIEW OF UNITS TRADED ON THE MSE IN 1999



Source: Malta Stock Exchange website www.borzamalta.com.mt

From these figures, it seems that the Maltese investor entered the equity market because of the increasing noise and talks about the high profits that some relatives or friends made in the past few months. These may indicate that investors were not buying shares because of attractive P/E ratios or because of undervalued share prices. This behaviour can be described as a herding behaviour. This possibility of a herding behaviour can be a sign that the Maltese investor had a short-term planning and so was not investing in a gradually long-term planned manner. Albert J. Fredman & Russ Wiles define this behaviour as speculating as “*speculators lay their money on the line in the hopes of making quick buck*”²⁰. In this period foreign stock exchange markets were in their highest levels. These could have increased the positive outlook of the stock exchange and so increasing the confidence level of the investors.

3.2.3 THE DIVIDEND YIELDS AND THE P/E RATIOS

Two tools of fundamental analysis are the Dividend Yield ratio and the Price/Earnings ratio. The dividend yield ratio helps the investor to calculate the expected rate of return on his investment based on the last dividend paid by the company. The price/earning ratio indicates the relationship of the current market price of the share compared to the last earnings per share registered by the company. This can be a good indication to analyse if the market price is overvalued or not. Tables 3.4 and 3.5 show the dividend yields and the P/E ratios of six main companies listed on the MSE during the 1999 – 2000 period. These

²⁰ *How Mutual Funds Work* - 2nd Edition – Albert J. Fredman & Russ Wiles.

are the Bank of Valletta plc (BOV), HSBC plc, Maltacom plc (MLC), Lombard Bank plc (LOM), the Middle Sea Insurance plc (MSI) and Simons Farsons Cisk plc (SFC).

Table 3.4 DIVIDEND YIELDS AND P/E RATIOS FOR BOV, HSBC AND MALTACOM plc BETWEEN APRIL 1999 AND MARCH 2000

BOV ²¹				HSBC ²²			MLC ²³		
	1998	1999		1998	1999 ²⁴		1998	1999	
Dividend	0.057	0.057		0.090	0.110		0.023	0.025	
EPS	0.234	0.253		0.263	0.375		0.090	0.083	
Date	Price	Div yield ²⁵	P/E ²⁶	Price	Div yield	P/E	Price	Div yield	P/E
Apr²⁷	1.90	3.00	8.12	Susp	-	-	0.90	2.56	10.00
May	2.18	2.61	9.32	Susp	-	-	1.00	2.30	11.11
June	2.75	2.07	11.75	2.90	3.10	11.03	1.26	1.83	14.00
July	2.99	1.91	12.78	3.59	2.51	13.65	1.32	1.74	14.67
Aug	2.80	2.04	11.97	3.58	2.51	13.61	1.22	1.89	13.55
Sept	2.80	2.04	11.97	3.68	2.45	13.99	1.27	1.81	14.11
Oct	2.86	1.99	12.22	3.70	2.43	14.07	1.23	1.87	13.67
Nov	3.19	1.79	13.63	4.20	2.14	15.97	1.44	1.60	16.00
Dec	4.40	1.30	18.80	5.16	1.74	19.62	1.72	1.34	19.11
Jan²⁸	4.91	1.17	19.41	7.00	1.57	18.67	2.50	1.00	30.12
Feb	5.00	1.14	19.76	7.05	1.56	18.80	3.17	0.79	38.19
Mar	4.74	1.20	18.74	6.65	1.65	17.73	2.80	0.89	33.73

²¹ Bank of Valletta plc Financial Results published in October 1999

²² HSBC plc Financial Results published in February 2000

²³ Maltacom plc Financial results published in March 2000

²⁴ Financial Results on a 15 month period

²⁵ Dividend Yield = (Last Dividend Paid / Market Price) * 100

²⁶ Price on Earning Ratio = Market Price / Last Earning per Share

²⁷ From 1st April 1999 till 1st January 2000, Dividend Yields and Price Earning Ratios are calculated on the results for the year 1998 for all three companies. This facilitates comparison between companies.

²⁸ From 1st January 2000 onwards, Dividend Yields and Price Earning Ratios are calculated on results for the year 1999 for all the three companies.

Table 3.5 DIVIDEND YIELDS AND P/E RATIOS FOR LOMBARD BANK, MIDDLE SEA INSURANCE plc, SIMONS FARSONS CISK BETWEEN APRIL 1999 AND MARCH 2000

LMD ²				MSI ³⁰			SFC ³¹		
	1998	1999		1998	1999		1998	1999	
Dividend	0.045	0.050		0.065	0.068		0.009	0.015	
EPS	0.174	0.189		0.117	0.132		0.003	0.018	
Date	Price	Div Yield	P/E	Price	Div yield	P/E	Price	Div yield	P/E
Apr³²	2.61	1.72	15.00	1.88	3.46	16.07	0.55	1.64	183.3
May	3.10	1.45	17.82	1.90	3.42	16.24	0.55	1.64	183.3
June	3.30	1.36	18.97	2.30	2.83	19.66	0.53	1.70	176.7
July	3.35	1.34	19.25	2.46	2.64	21.03	0.52	1.73	173.3
Aug	3.24	1.39	18.62	2.50	2.60	21.37	0.51	1.76	170.0
Sept	3.30	1.36	18.97	2.50	2.60	21.37	0.55	1.64	183.3
Oct	3.55	1.27	20.40	2.60	2.50	22.22	0.52	1.73	173.3
Nov	3.63	1.24	20.86	2.60	2.50	22.22	0.58	1.55	193.3
Dec	4.15	1.08	23.85	3.10	2.10	26.50	0.60	1.50	200.0
Jan³³	4.63	1.08	24.50	3.48	1.95	26.36	0.65	2.31	36.11
Feb	5.00	1.00	26.46	4.80	1.42	36.36	1.16	1.29	64.44
Mar	4.95	1.01	26.19	4.10	1.66	31.06	0.70	2.14	38.89

²⁹ Lombard Bank plc Financial Results published in November 1999

³⁰ Middle Sea Insurance plc Financial Results published in April 2000

³¹ Simons Farsons Cisk plc Financial Results published in May 2000

³² From 1st April 1999 till 1st January 2000, Dividend Yields and Price Earning Ratios are calculated on the results for the year 1998 for all the three companies.

³³ From 1st January 2000 onwards, Dividend Yields and Price Earning Ratios are calculated on the results for the year 1999 for all the three companies.

Exhibit 3.4 THE P/E RATIOS OF THE THREE BANKS

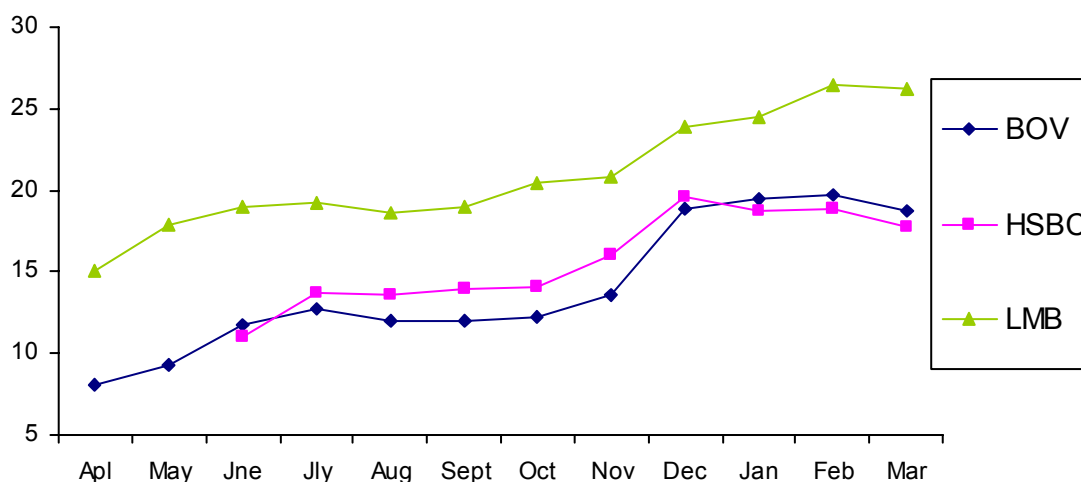
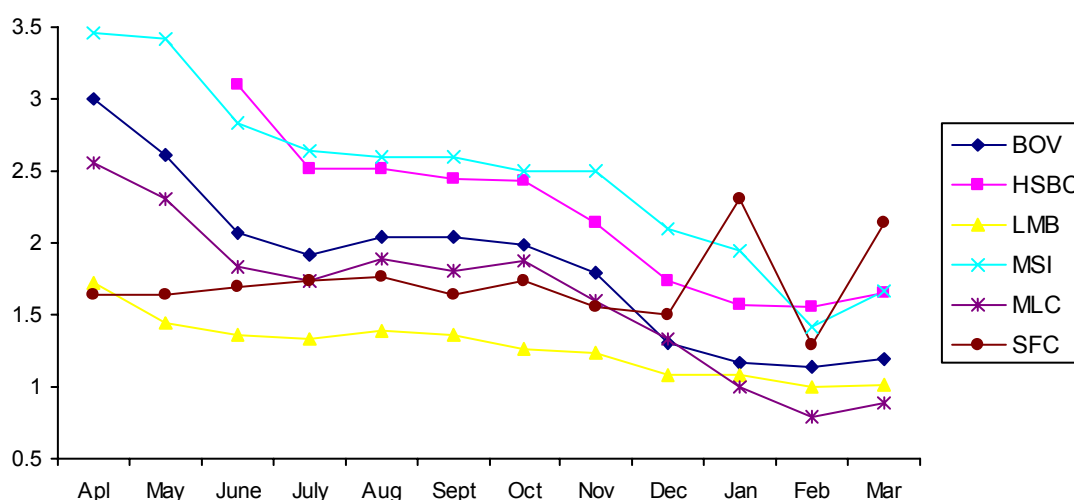


Exhibit 3.5 THE DIVIDEND YIELDS OF THE SIX COMPANIES LISTED ON THE MSE INDEX



From these figures it points out that those investors that bought shares during the last months of these Exhibits (the last part of the boom cycle), may either were not aware of the low rate of return (in dividends) on their investments or they may have increased their level of risk tolerance, as these returns were at a very low levels compared to other returns on other financial investments like bank deposit accounts.

3.3 THE ROLE OF THE AUTHORITIES AND THE STOCK-BROKING FIRMS IN THE BULL MARKET

Both the authorities (the Minister of Finance in February 2000) and some stock-broking firms (such as Hogg Capital Stock-broking Limited in December 1999) issued a notice signal to the Maltese investor that this inflation in the MSE index was not being rational and soon the bubble may blow up, but it seems that investors gave them little importance (indicated from constant high trading levels) at that time as they may were blinded by profits.

Mark Hogg of Hogg Capital Stockbroking Limited, wrote in The Malta Business Weekly on the 23rd December 1999 about this inflation in the trading activity. He stated that "*The feverish trading activity of the past fortnight or so has included a spate of entirely new investors looking to make some easy money in the local capital market. But it won't last. It never does. Those investors arrogant enough to believe that they have been extremely clever to be trading in the local equity market will probably be the first to panic out of their investments and probably at a loss.*" ³⁴

The warning bells rang also from Hon. John Dalli M.P. Minister of Finance. He said³⁵ that this "*inordinate inflation*" could serve as an attraction for small investors who can be "*fleeced by the market markers*". This meant that stock-

³⁴ The Malta Business Weekly 23 – 29 December 1999, Issue No.270, Pg 1, 'Investment peek unlikely to last'

³⁵ The Malta Business Weekly 24 February – 1 March 2000, Issue No.279, Pg 3, 'Stockbroking community annoyed with Dalli's comments'

broking firms were dealing on behalf of their clients in order to earn commissions and not by giving a good investment advice. This caused a small dispute between the ministry of finance and the stock-broking firms, each part defending their views.

3.4 THE COLLAPSE OF THE MARKET

Every market is determined by its demand and supply. As some investors began to exit the market, for different reasons (such as to cash their profits or because the level of risk that the market can go down was continuously increasing), the supply increased more than the demand and so prices started to go down.

The majority of the Maltese investors were in a dilemma: Sell now at a loss or wait till the market peaks again. When one compares the volume levels of the year 2000 to those of the preceding year, it seems that the majority opted to stay in the market as the level of trade was much lower compared to when the market was going up. This behaviour can be attributed to the Regret Theory³⁶. Table 3.6 and Exhibit 3.6 show how the number of units traded decreased drastically from when the bull market balloon burst on the 24th March 2000.

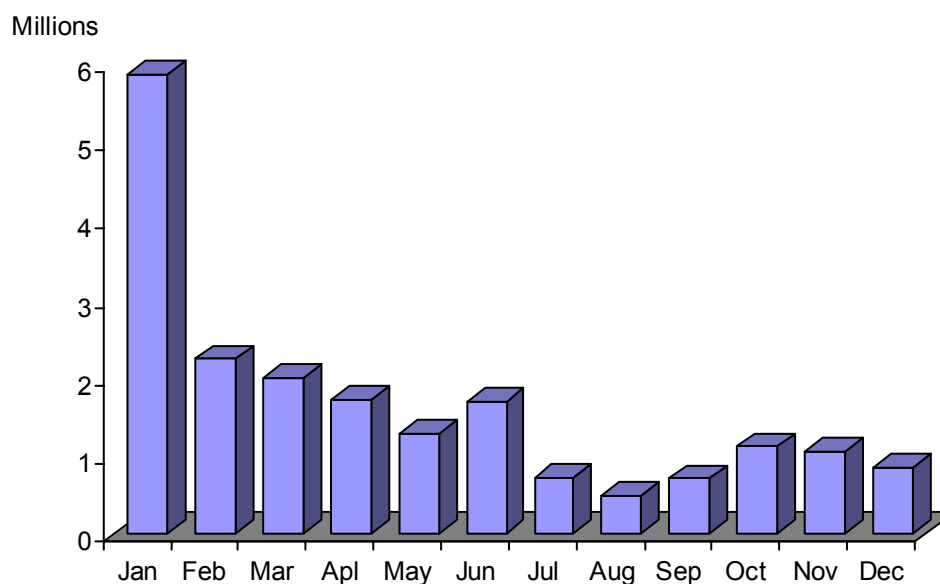
³⁶ *ibid.*

Table 3.6 NUMBER OF UNITS TRADED ON THE MSE IN THE YEAR 2000

Month	Units Traded	Month	Units Traded
January	5,864,307	July	723,008
February	2,235,134	August	484,002
March	1,986,510	September	706,678
April	1,718,894	October	1,118,411 ³⁷
May	1,276,575	November	1,051,794
June	1,680,935 ³⁸	December	852,611

Source: Malta Stock Exchange Monthly Reports Jan 2000 – Dec 2001

Exhibit 3.6 THE DECREASE IN THE NUMBER OF UNITS TRADED ON THE MSE IN THE YEAR 2000



Source: Malta Stock Exchange Monthly Reports Jan 2000 – Dec 2001

³⁷ Excluding the IPO from IHI plc of 5,197,239 shares

³⁸ Excluding the IPO from Plaza plc of 1,513,250 shares

3.5 THE INVESTOR’S BEHAVIOUR TOWARDS COLLECTIVE INVESTMENT SCHEMES

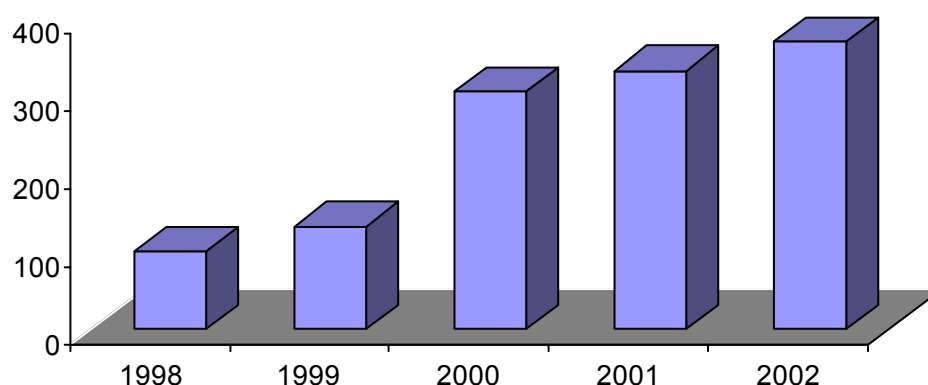
The Maltese investor was first introduced to the collective investment schemes in Malta in the year 1995 with the issuing of the La Valette Global Fund and the La Valette Capital Growth Fund, both issued by the Valletta Fund Management on the 22nd September 1995. This was a new concept on how to invest money for the local investor. This concept helped small investors to take part in the stock market by investing small amounts of money in a fund where all money invested by the investors are pooled in one account and then diversified to the various equities and bonds that are listed on the market. This meant less risk for the investor while the financial advisors were targeting new clients that were reluctant to get in the market before. The number of these CIS’s continued to increase as was shown table 3.7.

Table 3.7 NUMBER OF COLLECTIVE INVESTMENT SCHEMES ISSUED AND SURRENDERED IN MALTA FROM YEAR 1998 TILL YEAR 2002

	1998	1999	2000	2001	2002
CIS’s Issued	51	56	177	77	50
CIS’s surrendered	0	24	3	51	13
Total CIS’s	100	132	306	332	369

Source: Malta Financial Services Authority: Investment Services Unit

Exhibit 3.7 NUMBER OF COLLECTIVE INVESTMENTS SCHEMES IN MALTA 1998 - 2002



Source: Malta Financial Services Authority: Investment Services Unit

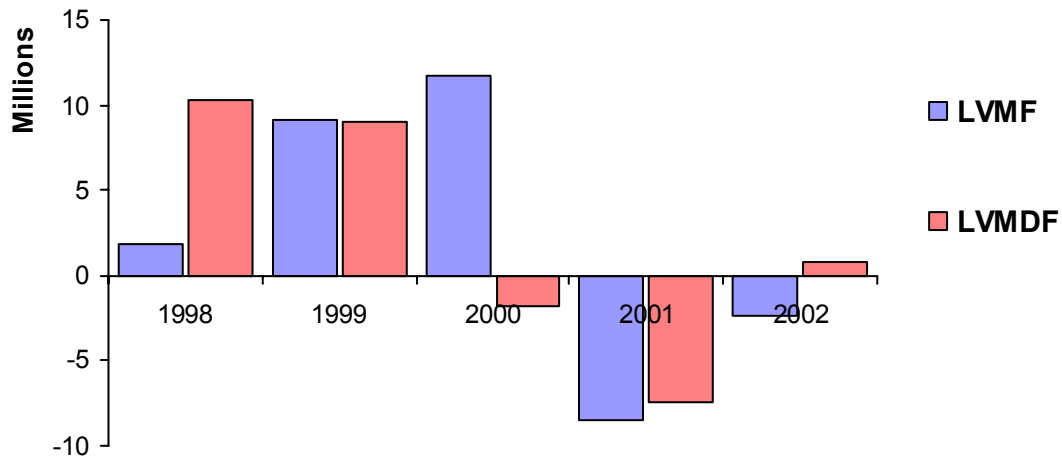
The size of these funds also increased. Table 3.8 shows the amount of investments created and redeemed by the Maltese investor in some of the funds offered by the Valletta Fund Management. The figures reflect the changes in the funds during a full financial year.

Table 3.8 INVESTMENTS BOUGHT AND SOLD IN TWO FUNDS OFFERED BY THE VALLETTA FUND MANAGEMENT

	LA VALETTE MALTA FUND (LM)			LA VALETTE MALTA BOND FUND (LM)		
	Created	Redeemed	Diff	Created	Redeemed	Diff
'98	2,291,559	(492,054)	1,799,505	12,160,292	(1,800,369)	10,359,923
'99	12,408,989	(3,299,588)	9,109,404	13,286,855	(4,275,243)	9,011,612
'00	20,488,064	(8,739,638)	11,748,426	7,852,102	(9,692,231)	(1,840,129)
'01	2,017,827	(10,441,965)	(8,424,138)	1,606,511	(9,011,124)	(7,404,613)
'02	425,887	(2,764,307)	(2,338,420)	2,757,235	(1,954,921)	802,314

Source: La Valette Funds SICAV plc Annual Reports 1998 – 2002

Exhibit 3.8 FUNDS CREATED AND REDEEMED IN TWO CIS 1998 - 2002



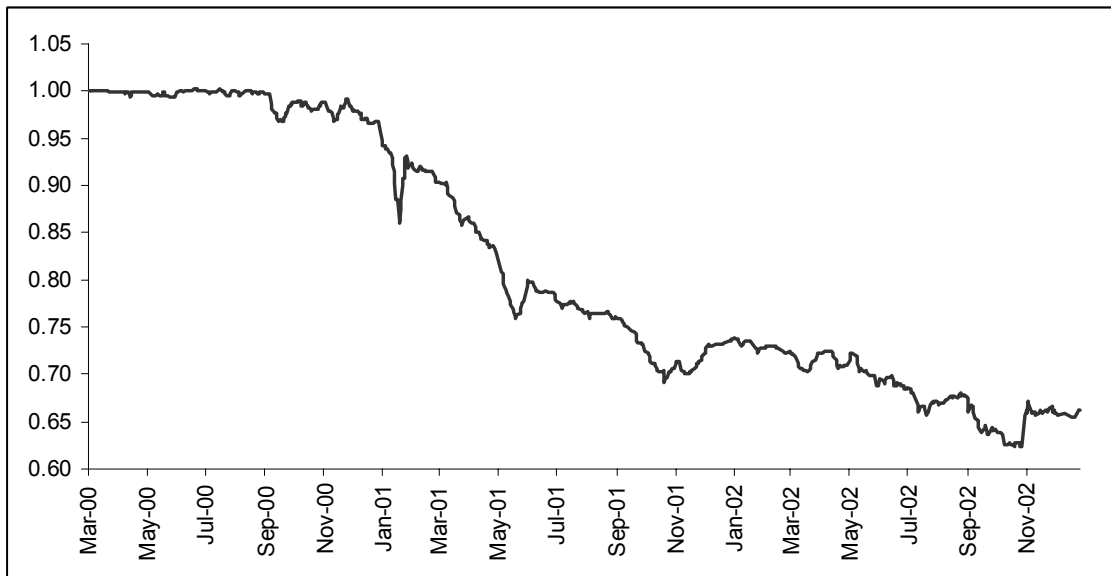
Source: La Valette Funds SICAV plc Annual Reports 1998 – 2002

From these figures, one can confirm that as the market started to decline, the amount of shares redeemed was much lower than the amount of shares created before. This implies that the investors did not sell their holdings, and thus suffered a loss in their investments.

As the local stock market had yielded negative returns over the three years ended December 2002, for new investors, it was rather difficult to recoup even the cost of buying the funds, never mind a profit. For investors taking the short-term perspective and selling out in a panic, they had definitely incurred losses. This can easily be seen in some collective investment schemes like the Wignacourt Malta Fund and the Malta Privatisation & Equity Fund. These two funds had started operating at the price of LM1 and after more than three years on the market these are still trading at a price under their initial value. Their trading

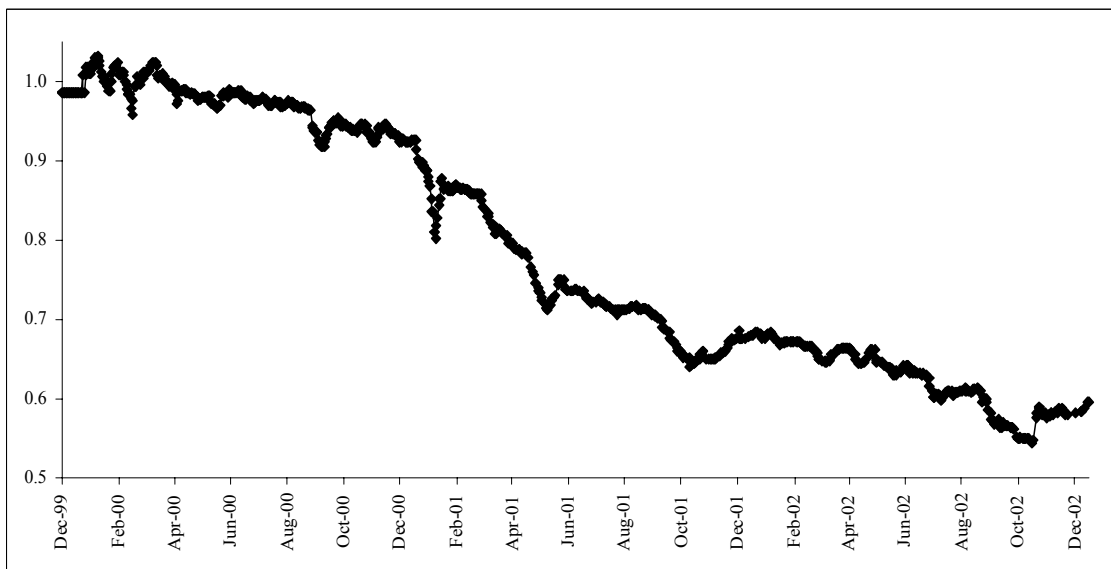
prices from the first day of issue till ends 2002 are shown in Exhibits 3.9 and 3.10.

Exhibit 3.9 WIGNACOURT MALTA FUND (LM) (MAR 2000 – DEC 2002)



Source: Valletta Fund Management web site www.vfm.com.mt

Exhibit 3.10 MALTA PRIVATISATION & EQUITY FUND (LM) (DEC 1999 – DEC 2002)



Source: Valletta Fund Management web site www.vfm.com.mt

Given the overwhelming growth of the industry in the last five years, one may conclude that many of the latest investors to collective investment schemes and those selling funds to investors are new to the product and the concept.

Some investors have invested in fund that they did not even know how the fund was made up and the level of risk that fund had. This was confirmed by Franco Xeureb, stockbroker at Bank of Valletta Stockbrokers Limited when he said *“Some investors come for advice and they don’t have a clue what the fund they have invested in is all about, in what currency they are dealing in and what level of risk the fund carries, ...”*³⁹.

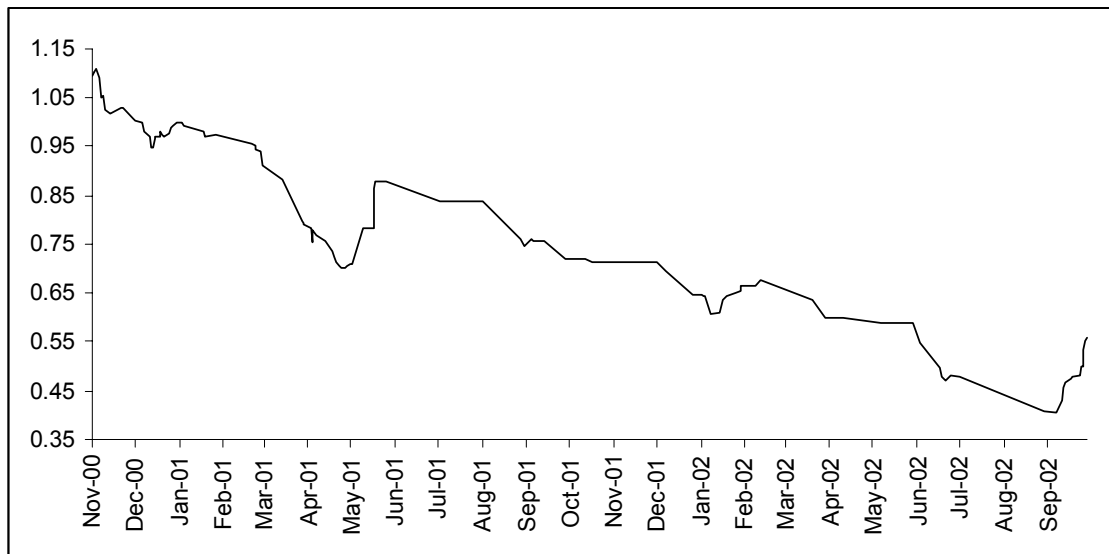
3.6 THE INVESTOR’S BEHAVIOUR TOWARDS INITIAL PUBLIC OFFERINGS

The increase in the interest of the public towards the MSE had caused some companies to generate new funds through the stock exchange market by issuing new shares. There were four new companies that were listed on the MSE during the period 1999 – 2002. These were: International Hotel Investments plc (May 2000), Plaza Centres plc (June 2000), Global Financial Services Group plc (February 2001), and Malta International Airport (December 2002). One company was listed on the Alternative Company List: Datatrak Holdings plc (November 2000). All these new issues were over-subscribed within few hours.

³⁹ The Malta Business Weekly 8 – 14 March 2001, Issue No.333, Pg 5, ‘Maltese Investors lacking in Financial Knowledge’.

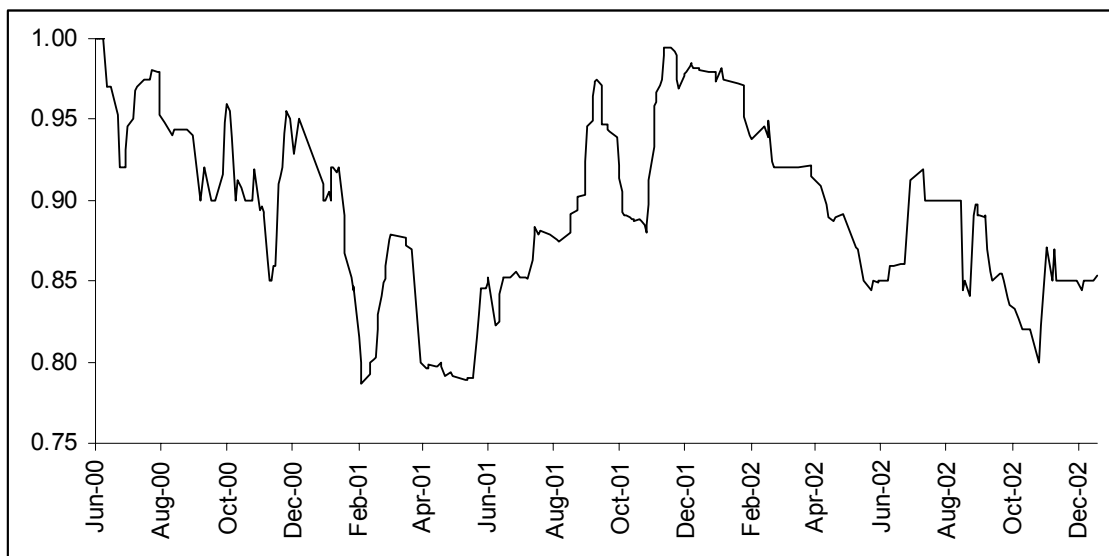
This can indicate that the Maltese investor still believed in the market as a means to generate a good rate of return on their investments. Although all these IPOs were oversubscribed, these hardly ever traded above the issuing price. This was illustrated from Exhibit 3.11 till Exhibit 3.14 where the trading prices of these new companies on the MSE were shown.

Exhibit 3.11 DATATRAK HOLDINGS PLC (NOV 2000 – DEC 2002)



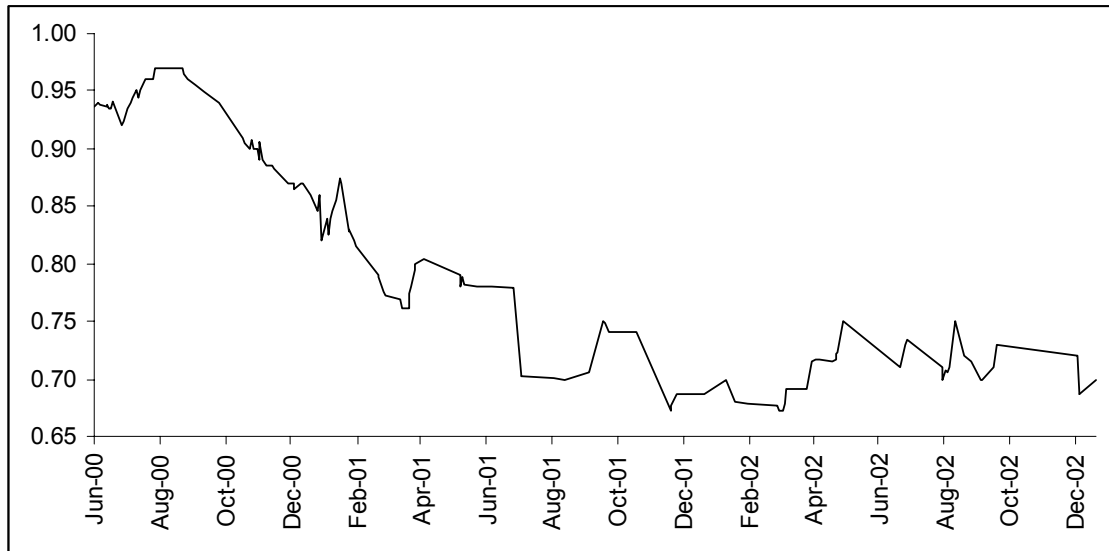
Source: Malta Stock Exchange website www.borzamalta.com.mt

Exhibit 3.22 INTERNATIONAL HOTEL INVESTMENTS PLC (MAY 2000 – DEC 2002)



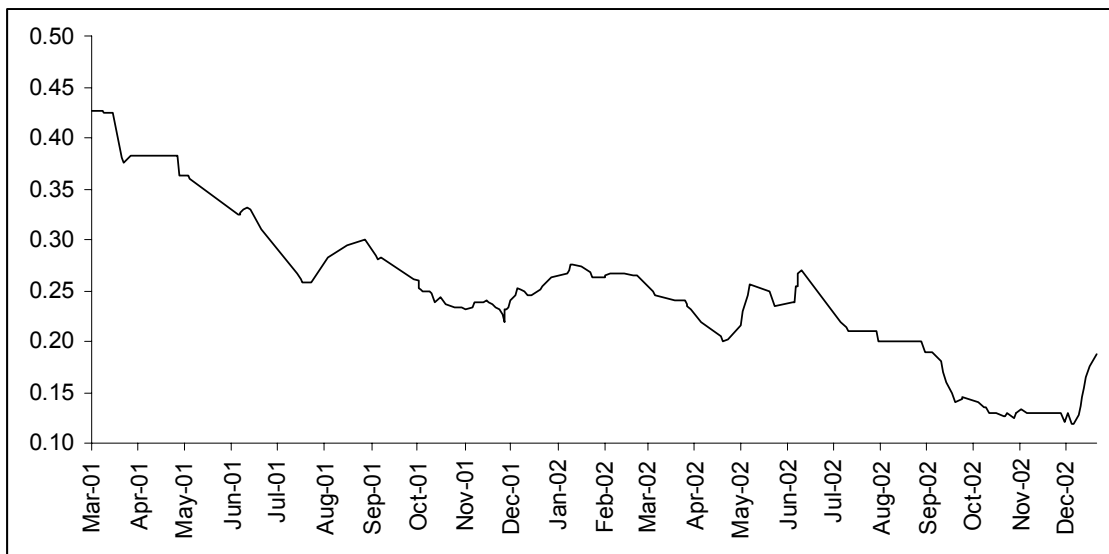
Source: Malta Stock Exchange website www.borzamalta.com.mt

Exhibit 3.13 PLAZA CENTRES PLC (JUNE 2000 – DEC 2002)



Source: Malta Stock Exchange website www.borzamalta.com.mt

Exhibit 3.14 GLOBAL FINANCIAL SERVICES GROUP PLC (MARCH 2001 – DEC 2002)



Source: Malta Stock Exchange website www.borzamalta.com.mt

This risk that the IPOs may have issued their shares at a high price was also noticed by the Minister of Finance. Minister Dalli had stated that the bull market may have been a good opportunity for those intending to go public to enter the

market at high prices, prices that when “*viewed outside the euphoria would have little intrinsic value.*”⁴⁰

From this analysis, it seems that the Maltese investor over-reacted to any financial news whether it was positive or negative. This may imply that the investor was not well educated about the risks and returns that the market is made of. It seems that the investor got carried by the mania (herding effect) while found it hard to pull out of the market when they were suffering big losses on their holdings (regret theory).

In the next chapter the behaviour of the Maltese investor was examined in more detail by means of two separate surveys. One survey dealt with how the stock-broking firms see their clients’ behaviour, while the second survey carried out among the general public dealt with how they acted during this period on the market.

⁴⁰ The Malta Business Weekly 24 February – 1 March 2000, Issue No.279, Pg 3, ‘Stockbroking community annoyed with Dalli’s comments’.

CHAPTER 4

TWO SURVEYS CONCERNING THE MALTESE INVESTOR BEHAVIOUR: SURVEYS RESULTS AND ANALYSIS

4.1 QUESTIONNAIRE STRUCTURE AND SCOPE

In order to obtain a broad overview of the Maltese investor behaviour towards the Malta Stock Exchange during the 1999 – 2002 period, two questionnaires were prepared, one distributed among seven stockbroking firms⁴¹ that operate locally, while another survey was done among the general public with a sample size of 300.

The stockbroking firms' questionnaire was structured into three sections: 'Investors' Behaviour', 'Stockbroking Firms Role', and 'Looking Forward'. The questionnaires were handed to each of these firms personally with a covering letter explaining the purpose of the research while assuring them of total confidentiality while as an incentive to induce participation in this exercise, a copy of the final result was promised to anyone that was interested. A copy of the covering letter and the questionnaire with the results in percentage form are found in Appendices A and B.

The structure of the general investor questionnaire was made up of four sections: 'General View', 'Investment Decision', 'Market Downturn', and 'Personal

⁴¹ In Malta there are as at March 2004 a total of 13 licensed stockbroking firms that can transact business on the MSE. The sample represents a percentage of 54% of all stockbroking firms.

View'. A sample of 300 individuals was chosen randomly. To facilitate their participation, a stamped self-addressed envelope was provided. Though the data collected from the questionnaire was unique, it was susceptible to memory and hindsight biases that may lead to idealized or distorted responses. The opinions expressed by these investors through this questionnaire cannot be generalized to the entire investing public. A copy of the covering letter and the questionnaire with the results in percentage form are found in Appendices C and D.

The questionnaires consisted of ten questions each. Both questionnaires were fully structured and the respondent had to tick on the best answer from the range of possible answers provided. The respondent had also the option to write down any other explanatory comments or opinions for each question if he wished to.

4.2 STOCKBROKING FIRMS' SURVEY

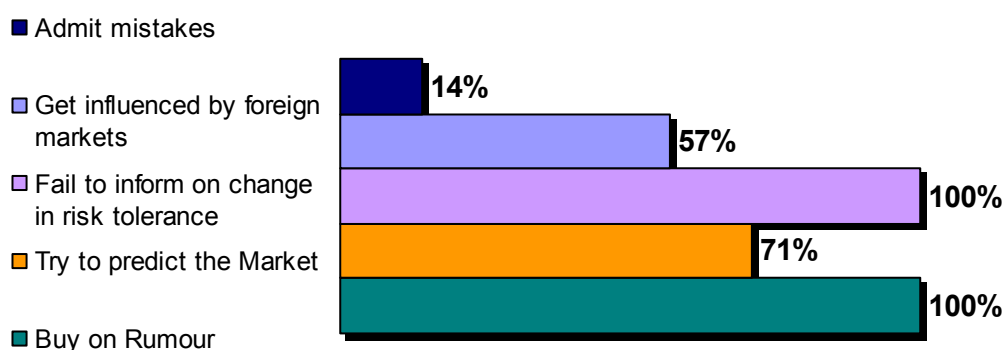
4.2.1 INVESTORS' BEHAVIOUR

The first section of the questionnaire aimed at obtaining some information regarding the general investor behaviour towards the Malta Stock Exchange. In question 1, the general behaviour was analysed while question 2 was aimed to distinguish what type of fundamental analysis the Maltese investor⁴² does before taking a decision to invest in the MSE. When asked if the Maltese investor buys on rumour and if the investor fails to inform their financial representative of any changes in their risk tolerance, 100% of the respondents agreed with both

⁴² The word investor will refer to the Maltese investor.

statements. On the other hand, 71% of the sample agreed that the investor tries to predict the market, while 57% were of the opinion that the local investor gets influenced by foreign stock markets developments. Interestingly, only 1 respondent said that investors admit their own mistakes.

Exhibit 4.1 QUESTION 1: INVESTOR BEHAVIOUR



When stockbrokers were asked what type of indicators their clients analyse before giving an instruction to buy or sell some holdings, 71% said that their clients look at new opportunities of a company, while 43% only look at the possible dividend yields they can get from their investments. A low percentage of 14% look at the Price/Earnings ratio or the Price/Book Value ratio. This same question was asked in the questionnaire distributed among the general public in order to compare the views of the stockbrokers to that of the investor.

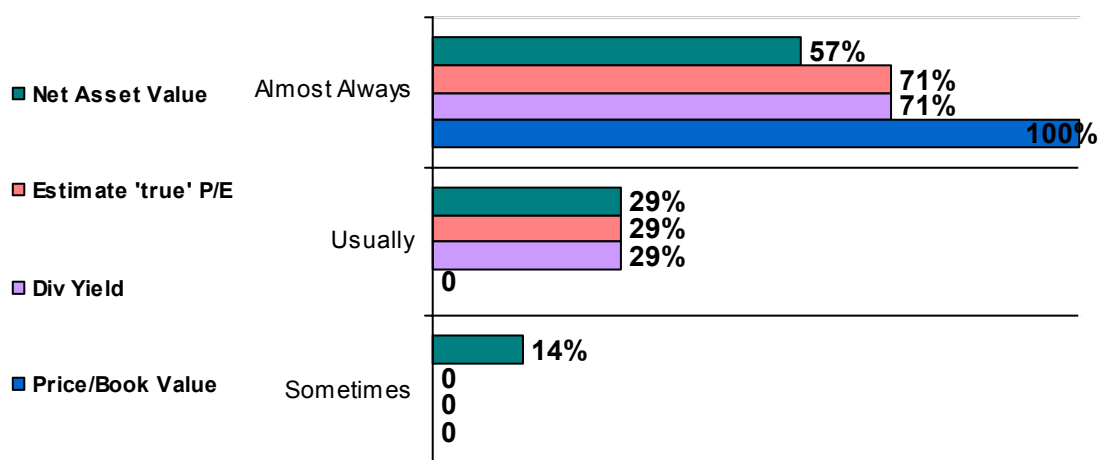
4.2.2 STOCKBROKING FIRMS ROLE

The second section of the questionnaire concerned the opinions that stockbroking firms have on certain developments in the MSE during the period 1999 – 2002 while two questions tried to uncover what type of analyses, whether

fundamental and technical or both the respective respondent company employed in order to give the best advice to their clients.

In question 3, the respondents were asked about the fundamental analysis tools that they make use of. Four different tools were mentioned while they had the option to specify other tools normally employed. Because of confidentiality and competitive reasons, some firms preferred to list a limit amount of tools besides the main four given. For each tool, they had to choose one of five possible answers on a roughly scale. These were: Almost Always, Usually, Sometimes, Seldom or Hardly Ever. This structure helped to analyse in more depth which are the most common tools used, then just saying yes or no. Exhibit 4.2 shows how the responses were distributed and it indicates that all the four given tools are normally employed. As the options Seldom and Hardly Ever were never ticked, these were left out from the graphical presentation in Exhibit 4.2.

Exhibit 4.2 QUESTION 3: FUNDAMENTAL ANALYSIS TOOLS



Some respondents listed other tools that normally help them to give the best possible advice. These included the debt ratio, the debt service ratio, the discounted future expected cash flows and the price on cash flow ratio.

The structure of question 4 was the same as the previous question. The most common technical tools resulted to be the support and resistance levels (58%) and figure charts (43%). The other tools (45 degree Bullish Support Line and the Head and Shoulders theory) are rarely or hardly ever used. Other tools that stockbrokers indicated were the relative performance analysis of a stock compared with the MSE Index, the 200 & 50 day simple moving averages and analysing the volume levels.

Stockbrokers were asked what, in their opinion, was the role of fund managers in the bullish market. 57% of the respondents said that these managers caused part of the mania by issuing a large number of new collective investment schemes in order not to be left out of the market. With regards to the underperformance of IPOs, 86% were of the opinion that investors bought these shares as it was an ongoing mania to buy whatever was on the market, and not the result of manipulation of information by underwriters. One market analyst said that auditors fail to take into consideration the true level of risks that the projected cash flows have. One analyst said that investors were victims of greed.

In question 7, respondents were faced with four possible reasons that could have affected the behaviour of the investor to cause a market downturn after March 2000. 57% were of the opinion that investors were only selling shares to cash their profits, while the speech of the Minister of Finance in Feb 2000 that the market was inflated a lot was regarded as important by 43%. The fact that the privatisation process was taking long and the introduction of a new tax on Collective Investment Schemes were both seen as important by a low percentage of 29% of the surveyed stockbrokers. One analyst indicated that most investors have not yet sold their underperformed shares and on the first signals that the market will go down again, these investors are ready to dispose off their holdings, causing yet another crash.

71% of the respondents predicted a market crash by means of fundamental analysis, while market psychology was the second best answer with a score of 57%. Technical analysis and personal feelings were equally good predictors by 43% of the responses. Ongoing talks and the short term investment horizon of the investors were not so relevant to predict the market crash.

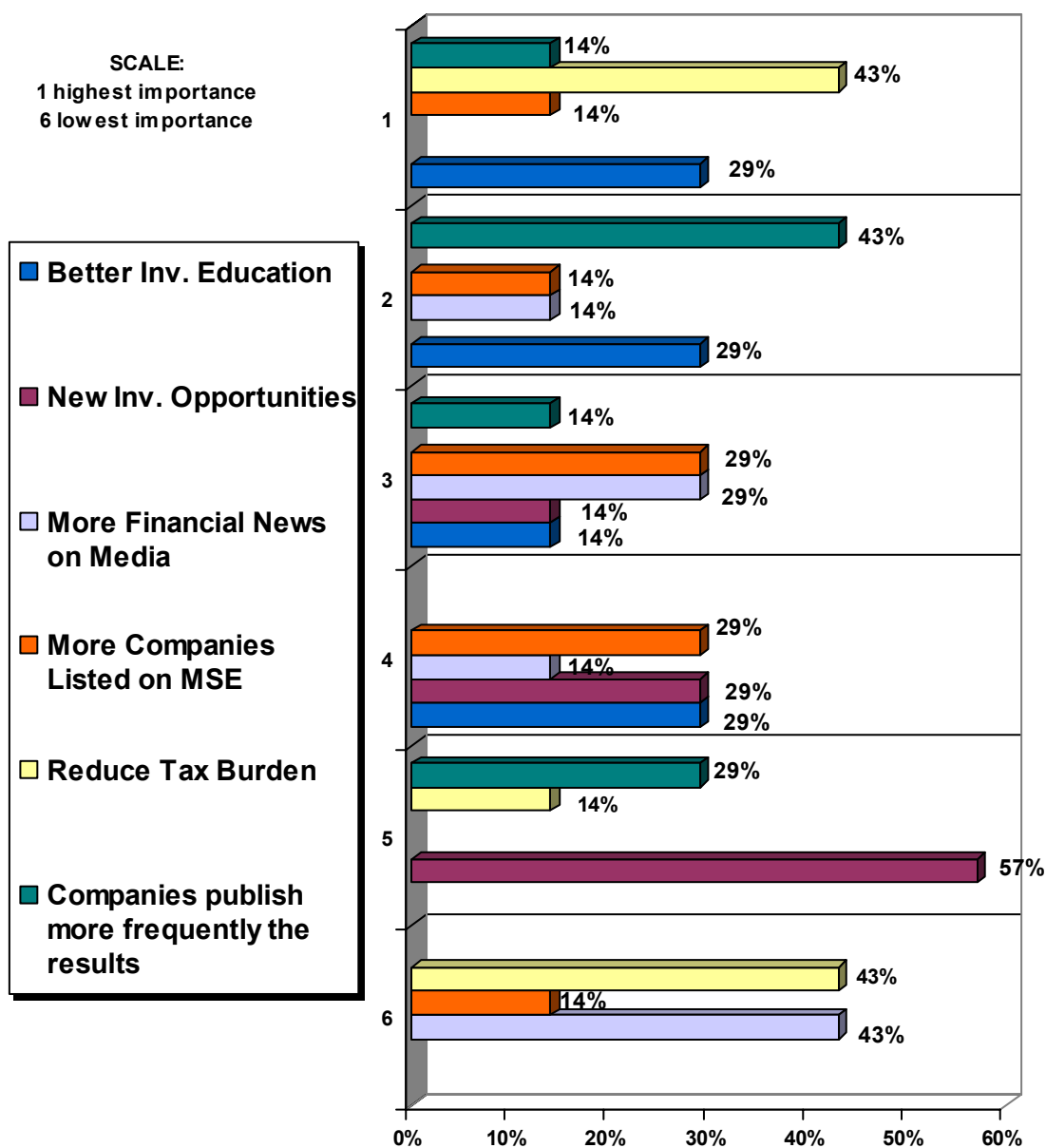
4.2.3 LOOKING FORWARD

The last two questions of this survey focused on what can be the best way to regenerate confidence in the Malta Stock Exchange. Following the recent good performance of the MSE Index (from Oct 2002 onwards), 57% of the sample

indicated that the investor was gradually returning to the local stock market but that there was always room for improvement.

When they were asked to prioritise from the six given options in order to regenerate confidence, the most popular priorities appeared to be Better Investor Education and the fact that companies must publish their results more frequently. An overview of the order of priorities was summarised in exhibit 4.3. One analyst indicated that in order to regenerate confidence, the government must stop its managerial interference in those companies in which it is shareholder, and so let them operate as private independent firms.

Exhibit 4.3 PRIORITIES TO REGENERATE CONFIDENCE IN MSE



4.3 THE GENERAL PUBLIC SURVEY

The sample size for this questionnaire was of three hundred. From this size, the response rate was 56% (168 replies). From these replies, 53 respondents indicated that they have bought/sold local shares/collective investment schemes during the period 1999 – 2002. This does not imply that those respondents who

did not reply to this questionnaire have never traded in the Malta Stock Exchange in this period. Thus the positive response rate on which the following results were compiled was based on a response rate of 17.67%.

4.3.1 GENERAL VIEW

From the 53 responses, 64.15% replied negatively when they were asked to state if they were satisfied with the rate of return from their investments. This question was connected with another question that indicated that 69.81% of the respondents were trading for the first time in the MSE.

4.3.2 THE INVESTMENT DECISION

This section of the questionnaire, tried to understand the investor behaviour when s/he decided to invest in the stock market. In question 2, the reason which caused the investor to invest was addressed. From the results the most common reasons why investors invested in the MSE were because of professional advice (64.15%) and positive experience of friends/family members (62.26%). Personal feelings were also important (54.72%) while 24.53% made some personal calculations to check if it was worth it or not to invest and more importantly where to invest. From those who made some calculations, all of them calculated the Dividend Yield while the Price on Earnings ratio was calculated by 61.54% of respondents. Less popular were the Net Asset Value and the Price/book Value ratios with scores of 46.15% and 30.77% respectively.

This low rate of investors actually making some calculations compares well with the 33.96% of investors who responded positively when asked if they had some financial education background. 88.68% knew about the risks of their shares while 71.70% said that they had a long term investment horizon. Only 24.53% had a stop-loss policy to limit their losses.

4.3.3 THE MARKET DOWNTURN

From the 24th March 2000, the MSE started its downturn. From that day till the end of 2002, 30.2% of the respondents sold part/all their holdings, while 9.43% bought shares during that period. Half the responses indicated that they have sold and bought again or vice-versa during this period. Only 7.55% have not done any transactions. From those who have sold some holdings, 83.67% sold as they had personal feelings that the market will continue to fall. Others, 48.98%, sold because of negative performance while 41.51% acted on the advice of a stockbroker. The results of this question (exhibit 4.4) were compared to the answers given in question 2 where the investor gave his reasons why he invested in the MSE (exhibit 4.5).

Exhibit 4.4 THE DECISION TO INVEST

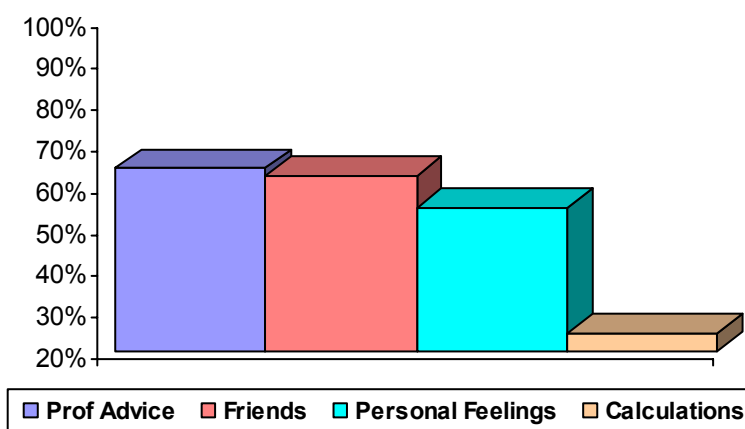
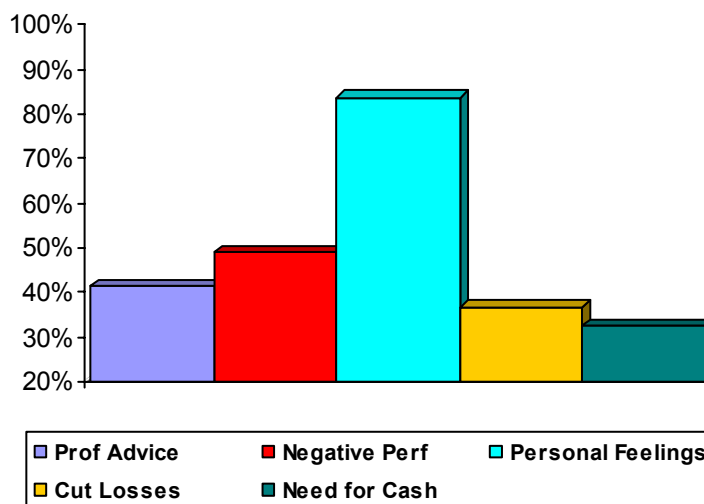


Exhibit 4.5 THE DECISION TO SELL



A slight majority of 57.14%, from those who have sold or bought shares in the downturn period have returned trading on the MSE

4.3.4 PERSONAL VIEW

In this section, the way that investors follow their investments was analysed while they gave their view about the Malta Stock Exchange and stockbrokers in

general. 86.79 % of investors follow regularly their investments. 66.04% follow financial news and programmes on television while 60.38% follow through daily newspapers.

The last two questions of the questionnaire showed very interesting results. While 84.91% consider that the MSE is a risky place to invest, 64.15% believe that they can earn good profits by trading. 30.19% and 18.87% consider the MSE as a place to take off your money and/or a place only for the rich people. When they were asked to give their opinion about the level of advice stockbrokers give, 60.38% indicated that they give good investment advice, while 83.02% indicated that they are responsive to their needs. Although these results show the high level of service given by the local stockbrokers, 50.94% of the investors still believed that stockbrokers lack responsibility as some investors blamed professional advice as the cause for their losses.

4.4 ANALYSIS OF SURVEY RESULT: DISCUSSION

The stockbroking survey results clearly indicate that the investor lacks certain level of education. This can be seen as local investors get influenced a lot by a number of factors that should not be taken into consideration when deciding to invest on a stock market. As the first questionnaire indicates, all the brokers surveyed indicated that investors buy on rumour and try to predict the market themselves while on the other hand they still do not admit their own mistakes. These findings compare well with the second questionnaire, where a high

majority of investors admitted that when they decided to buy shares/CIS's they were influenced by the positive performance of their friends and by personal feelings while blaming stockbrokers of lacking responsibility.

An interesting result was that while 64.15% of investors were influenced by professional advice when they first bought shares, 60.38% indicated that stockbrokers give good investment advice. One way of interpreting this result was that the overwhelming majority, who took a professional advice, have not changed their opinion on stockbrokers. This was despite the fact that only 35.85% were satisfied with their rate of return on their investments. This does not mean that those who were not satisfied have suffered a loss. Expectations can be different for different investors, and so a small return may not be a satisfactory return for an investor with high expectations.

Both the investors and the stockbrokers indicated that the most common calculation was the dividend yield, while P/E and P/BV ratios are less popular. Stockbrokers' survey indicated that investors are returning to the market even if by a slower pace. This was confirmed by the investors' survey as 62% have either bought or both bought and sold shares/CIS's again. This may be a good indication that the Maltese investor is regenerating his confidence in the stock market. Keeping in mind that according to the first survey, the stockbrokers stated that investors get influenced a lot by foreign stock markets, this gradually return to the market may be an indication that investors are being influenced by

the foreign stock markets, as these are gradually re-coping from their bad times, and so the Maltese investor may believe that the MSE will too recover from the market downturn suffered during 2000 – 2002.

In the next chapter, the theory discussed in the second chapter was compared to the results obtained from these two questionnaires. In Chapter 5, we tried to analyse if there was enough evidence of the herding theory, the regret theory, the prospect theory, the positive feedback theory and if the theory of bubble blows and crashes apply to the Malta Stock Exchange as well.

CHAPTER 5

EVALUATION OF SURVEY RESULTS: COMPARISON WITH THEORY

The survey results analysed in chapter four showed how the Maltese investor behaved during the period 1999 – 2002. But how do these results compare with the literature review discussed in Chapter two?

5.1 BEHAVIOUR IN BULL MARKET

5.1.1 HERDING PROCESS ON THE MSE

According to the herding theory discussed in chapter two, investors may trade because of the positive performance that friends could have generated. Herding behaviour is an irrational behaviour as investors do not calculate and evaluate the prospects and opportunities that the company they are investing in can generate. Herding behaviour leads to extreme outcomes and markets can end up either overbought or oversold. This herding behaviour on the MSE was confirmed in both surveys. While 100% of the stockbrokers' surveys indicated that investors bought on rumour, around 62% of the valid responses in the second survey pointed out that they bought shares after being influenced by positive experiences of friends/family members. This behaviour may indicate the need for better financial education and/or exemplify the 'greed' that investors can have for high returns in a short time frame. One must also note that herding behaviour does not only take place in new emerging markets, but this can be also

observed in more developed stock markets like the NASDAQ⁴³ and the London Stock Exchange. Studies⁴⁴ have identified herding behaviour in both these markets, which eventually caused bubbles and later crashes over time.

5.1.2 POSITIVE FEEDBACK TRADING ON THE MSE

The herding process is normally followed by the positive feedback trading theory, which states that investors buy after prices rise while sell after prices fall. This theory seems to apply also for the Maltese investors. The surveys results in chapter four indicated that 64% of the investors were not satisfied with the rate of return generated on their investment. It should be restated that the lowest level the MSE Index read during the market downturn was registered on the 30th October 2002, while the last time it read a lower level was on 1st June 1999 when it read 1706.1. So the 64% that were not satisfied with their returns may have either bought shares after June 1999 or they had expected a higher rate of return. June 1999 was the same month that HSBC shares started trading on the MSE after two months suspension during the takeover process. As was analysed in chapter three, the starting of trading in HSBC shares was accompanied by a positive increase in all share prices.

⁴³ NASDAQ, is the world's largest electronic stock market (based in US), listing approximately 3,600 of the world's most innovative companies.

⁴⁴ "The Dynamics of Institutional and Individual Trading," John Griffin, Jeffrey Harris, and Selim Topaloglu, *Journal of Finance* (December 2003)

5.1.3 BUBBLE BLOW PROCESS

As Kindleberger (1978, *ibid*) observed, stock market bubbles start to generate when there is a common consensus in the investment industry that a country or the world are passing through a new development and investing in this opportunity now could generate a very high return in the future. This was also the case in Malta. This new opportunity was noticed with the sale of Mid-Med Bank to HSBC. The political dispute⁴⁵ about the fair price of Mid-Med had led some investors to believe that the bank was sold cheaply. The presence of HSBC – one of the leading banks in the world – was seen as a safe place to invest money. Its share price exploded (June 1999 – March 2000) and this positive wind blew also the share prices of all listed companies (as shown in chapter three). This privatization of Mid-Med bank may have convinced the market that other state-owned entities such as the Malta International Airport, Bank of Valletta and Maltacom were next for privatization.

Another phenomenon that the Maltese investor could have taken into consideration may have been the positive performance in foreign stock markets. Foreign stock markets were passing through the technology sector revolution (later acknowledged as a Bubble) that hinted the drastic decrease in costs companies may witness with better technology and so better financial results in the near future. As the surveys pointed out, 57% of investors get influenced by foreign stock market developments. So this positive mentality may have

⁴⁵ The Malta Business Weekly, 22 – 28 April 1999, Issue No 235, Pg 3, ‘*Labour Party is 'constantly monitoring' Mid-Med deal - no further protest action announced*’

influenced the Maltese investor in his decision to buy shares or collective investment schemes.

5.2 BEHAVIOUR IN BEAR MARKET

Stock Markets can go up as well as down, as is well known. The MSE is no exception. No bull market lasts forever. Normally it is followed by a bear market. The behaviour in a bear market can be analysed by the prospect and the regret theories.

5.2.1 PROSPECT THEORY

The prospect theory analysed by Kahneman and Tversky (1979, *ibid*) introduced the observation that investors weight more their losses rather than their profits. This theory is based on Utility theory. According to this theory, the more one consumes of a good, the less is the increase in satisfaction he will get. This is called Diminishing Marginal Utility theory. So if an investor invested Lm 1,000, a decrease in investment of Lm 100 will have a greater effect than an increase of Lm 100 in his wealth. This theory applies also to the Maltese investor. This resulted from survey results that investors do not prefer to cut their losses. While 24% had a stop-loss policy when they first traded on the market, only one third of the respondents indicated that they sold part of their holdings in order to cut their losses.

5.2.2 REGRET THEORY

As the analysis regarding the flow of funds into Collective Investment Schemes (CIS's) indicated in chapter three (Table 3.8), the regret theory holds also for the Maltese investor. Funds flowing into CIS's were much larger than funds leaving the schemes during the market downturn. This behaviour was observed also in exhibit 3.6 which showed the drastic decrease in the number of units traded on the MSE in the year 2000. These evidences contradict the survey results. From the surveys it was noted that while 30% sold their holdings during the market downturn, an impressive 52% both sold and bought during this period. One reason for this discrepancy in results can be that investors sold only a small part from their investments.

As around 64% of the investors also considered professional advice when they invested on the MSE, the disappointment of these investors can be higher than those who invested without a professional advice, as the latter have no one to blame either than themselves.

5.3 TIME HORIZONS

Analysing the time horizon of an investment is important to determine if the initial expected level of satisfaction for an investor meets his actual satisfaction. Although 71% of the investors indicated that they had a long term horizon, more than 84% have sold part or all their holdings. This contradiction may be the result of the big losses that the investor may have experienced and so he may

decided to adjust his time horizon in order to limit losses. This holds well with the theory that investors have a long term horizon when buying in a bull market while shifting to a short term investment plan in a bear market. The hypothesis of shifting time horizons in order to limit losses was sustained by the high 83% that sold part of their holdings as they believed that the market will continue its negative performance. This hypothesis still oppose the theory that long term investment plan should persist irrespective of the position of the market. Curmi (2004) stated that *'the problem with Maltese investors is that they tend to look to the very short term. They invest, they enjoy watching their investment going up, but they panic when they see it going down. This is coupled by the fact that the main determinants in investors' decisions are their instinct, word of mouth among friends and what they hear in the media.'*⁴⁶

As 66% of the respondents had no financial education background and 55% entered the stock market because of personal feelings that they can generate good returns, these figures combine well with the theory that some investors entered the market with the perception of getting rich in a short time without real understanding of the risks involved. One must also note that 70% of the respondents were trading on the MSE for the first time.

⁴⁶ The Malta Economic Update: Issue January 2004. pg 13.

5.4 INITIAL PUBLIC OFFERINGS

The listing of four new companies on the Malta Stock Exchange, namely, International Hotel Investments plc (May 2000); Plaza Centres plc (June 2000); Global Financial Services Group (February 2001); and Datatrak Holdings plc (November 2000) were oversubscribed within hours. As the stock market had just witnessed its first bull run, companies may have been tempted to enter into the equity markets with high share price in order to boost to the maximum their capital inflows. As investors were at that moment blinded with the positive returns of other share prices, they may have given little consideration to the intrinsic value of the new IPO. This theory was confirmed as according to the stockbrokers' survey, the high response was due to the ongoing mania that investors were buying whatever was for sale. During the interview with stockbrokers, on more than one occasion it was pointed out that investors hardly ever went through the financial documents that were available with every issue. This holds well with the theory discussed in chapter two. According to one research analyst, the data provided by the prospective listed companies were not properly adjusted to reflect the real risk that the projected cash flows were expecting to have. This lower discount rate for future cash flows showed a greater Net Present Value figures for new projects that the companies were planning to embark on. This was not as the theory stated as 'data mining' but according to this analyst it was the result of lack of proper risk calculations by auditors.

Some investors contact their financial intermediaries not for advice but for execution basis only. In fact, although all trading on the MSE must be done through a licensed stockbroker, only 65% of the respondents asked for professional advice when they bought shares while 45% asked for advice when they decided to sell.

5.5 NEWS REACTION

With the high speed development of the telecommunication industry, news travels quickly. From our survey it transpires local financial news on television is followed by 66% of investors surveyed while financial newspapers attract 60% of the respondents. This level of follow up demonstrates the importance that all news broadcasted must be correct, unbiased and does not mislead the investor. Though news may be correct, investors can either overreact or under react to its importance.

The analyses in chapter three appears to imply that investors overreacted to the news of the take-over of Mid-Med Bank and the good results published continuously throughout the year by the majority of the listed companies. They also overreacted to the news that the privatisation process for several state-owned firms was being initiated following the Budget speech for the year 2000. This behaviour of overreaction was recently evident in the Maltacom shares. In the period January – March 2004, the expected good dividend payout because of the income generated from the sale of holdings in Vodafone (Malta) plc, coupled

with the announcement of the privatisation process for the 60% government shareholding, caused inflation in price from Lm 1.05 to Lm 1.75. This was an impressive 67% increase in the share price. If one considers the long process that any privatisation process can have, one can describe this behaviour as overreaction behaviour.

On the other hand, investors under reacted to several positive results that companies were publishing during the bear market. The market downturn was more psychological effective than the positive fundamental data. This news under reaction was also recently observed in the HSBC shares. On the 13th February 2004 and the following week the share price of HSBC decreased from Lm 6.43 to Lm 6.02 (a decrease of 6.38%) even though the bank had just published its preliminary profit statement with a record Lm 25 million profit.

5.6 FUNDAMENTALS ANALYSIS

During the personal meetings with local stockbrokers, they all indicated the high importance given to fundamental analyses while expressed less weight to technical analysis tools. This holds with the theory that share prices must reflect fundamental data and not predicted by technical analysis. This behaviour can help the MSE to be more efficient as new information will be immediately correctly absorbed in the share prices. According to the Efficiency Market Hypothesis, markets can be efficient in three different forms: weak form (prices reflect historical data), semi-strong form (prices reflect both historic and

expected data) and strong form (prices reflect historic data, expected data and inside information).

In the next and final chapter, possible recommendations to improve the liquidity level and credibility of the MSE have been outlined. Together with the conclusions of this report, recommendations to improve the market efficiency level of the MSE were evaluated.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

In the period 1999 – 2002, the Malta Stock Exchange had witnessed its first bull and bear market in its twelve year history. The MSE attracted the attention of a large number of investors. For these investors this was a new way of investment rather than the traditional investments like bank accounts, foreign investments and property. Although some may have their fingers burnt, this high volatility in the MSE in recent years, has helped to generate interest in the general public, both investors and firms, to search for alternative sources of financing. The recent negative performance of the MSE has opened the way to increase the level of financial education among the Maltese investors.

6.1 MARKET EFFICIENCY

The evidence analysed and discussed in chapters three, four and five, indicates that the Malta Stock Exchange is not a very efficient market. The creation of bubbles and crashes is the best evidence. The Efficiency Market Hypothesis states that stock prices reflect all the information available for the investor. On the other hand, Behavioural Finance believers state that stock prices reflect market psychology. As the survey results showed, the majority of stockbrokers make use of market psychology while giving advice. This does not mean that they do not believe in market efficiency. In fact the research departments of stockbroking firms focus their energy in analysing fundamental data.

Laissez faire may be appropriate in the context of full market efficiency as new information will be immediately reflected in stock prices. Since this is not the case with the MSE, then regulators must play an instrumental role in strengthening the bond between information, information process, and asset prices. Education and training to increase the number of mature users of financial and non-financial information in the market is equally important.

6.2 DISSERTATION FINDINGS

The two surveys together with the data analysed in chapter three tried to answer the objectives of this research. From this report we observed a number of interesting points such as:

- The 230% increase in the MSE Index in the year 1999 was partly based on the undervaluation of stocks and partly to the overreaction that the Maltese Investor had for the privatisation of Mid-Med Bank and the possibility of other state-owned privatisations.
- There were fundamental reasons to enter the market in the first half of the year before stock prices reached high levels.
- There were no fundamental reasons to enter the market into the second half of the year as chapter three showed that return on investments were at a historical low.

- One stockbroker jokingly stated that in Malta we can have three types of markets: Bull Market, Bear Market and Sheep Market. This was clearly found out to be a good analysis of the MSE as both surveys concluded that the herding effect is very effective on the MSE.
- Investors consider stockbrokers as good and efficient advisers. On the other hand they are of the opinion that they lack responsibility.
- The Maltese investor still believes and trade on the MSE.
- Better Financial Education and a more Liquid Market will make the MSE a more efficient market.

6.3 FINANCIAL EDUCATION

As the surveys showed, investors weren't fully educated on the true short-term risk of investing in stocks and the benefits of proper diversification. Investors became blinded by stellar returns posted by stocks and, as a result, gave little credence to the possibility of a bear market.

A sizeable industry is emerging dedicated to investor education. It is composed of both private enterprises such as banks, as well as public agencies such as the Malta Financial Services Authority (MFSA) and the Malta Stock Exchange (MSE). These organizations all offer a wide variety of publications, seminars,

and other materials that seek to educate investors about investment philosophy and strategies, types and risks of various investment products, and the environment of investing, including risks associated with financial fraud. During 2003, the MFSA has reached an estimated audience of 27,000 through participation on TV and Radio Programs.⁴⁷

Investors should be comfortable with and behave in a reasonable manner in accepting the risks they bear regarding an investment. Investors have various risk preferences. They can display extremes of behaviour, which manifest at the one extreme as an overwhelming fear of risks, or at the other as a risk-loving (gambling) mentality. Neither extreme is beneficial in the long run. These messages should be sent consistently and regularly to investors.

6.4 LIQUIDITY

One of the main problems of the MSE is a lack of liquidity. There are no market makers on the MSE but price takers. No institution has the required finance in order to buy the excess supply for a particular share so as to prevent the price from falling. This lack of liquidity can have a severe effect on the market psychology. Under the current system, a trade of Lm 1,000 can reduce the total market capitalisation of the MSE by more than a Million pounds. As investors are exposed to this lack of liquidity, they expect a higher return on their investment.

⁴⁷ The Malta Economic Update: Issue February 2004. pg 25

One possible way to reduce this lack of liquidity is by increasing the number of platforms that one can use to trade. One must consider the developing of an on-line trading system for investors as well as brokers, where an investor can view the share prices in real time from his broker web site and by means of a mouse click he will perform his transactions through the broker.

Another way of increasing liquidity is to educate investors to make capital gains by exploiting profit opportunities by trading their holdings more frequently. This point was raised during an interview with a stockbroker. A typical example of these profit opportunities are the Maltacom plc shares during the first three months of 2004. Its share price increased by more than 60% in this period, and this may be a good opportunity for an investor to cash his profits. One also realises that even stockbrokers may be well off if this increase in trading takes place, as transaction costs increase too.

The development of new private pension plans by financial institutions in the coming months may generate more liquidity in the market. As the new pension reform system is expected to be revised and private pension schemes will be more marketed to the general public, the majority of these funds will end up trading on the MSE, either through direct investments or through current or new collective schemes with both local and international dimensions.

6.5 CONCLUDING REMARKS

Investors should be aware that they can be influenced by the actions of others. They have varying abilities and confidence when investing. Those lacking confidence may choose to seek professional advice. In seeking professional advice, investors should go to someone of demonstrable competence. For those seeking to invest without a professional advice should be careful that they are not responding to misleading signals. There are intangible benefits to investing. However, these benefits should be measured against the potential costs should the investment turn sour. A common mistake is buying a stock/fund because it did well in the past instead of studying what it will do in the future. Ongoing review of the investment helps to adjust the investment portfolio if necessary for new information.

The goals to encourage the local investor to return to the financial market should include the following:

- Talk plainly to investors about different types of funds and investments.
- Educate investors to have realistic expectations about fund performance.
- Explain the relationship between risk and reward to the investor.
- Encourage long-term investment objectives for investors.

- Avoiding unrealistic investment returns that will result in disappointment.

More research would improve the efficiency of the market and investors would be in a better position to make better-informed decisions. This will make trading based more on fundamentals rather than on noise. The purpose of this report was not to derive a final conclusion on the behaviour of the Maltese investor. More in-depth research should be encouraged in order to understand the real factors that cause investors to invest. By studying the behaviour of investors, authorities and interested parties can minimise the effects of irrational behaviour on the MSE by taking the necessary measures in time to limit this type of behaviour.

APPENDIXES

STOCKBROKING FIRMS' SURVEY

COVERING LETTER

Alexander Mangion
'Notre Dame',
St. Paul Street,
Zurrieq.

Dear Sir/Madam

You have been randomly selected to take part in my dissertation research entitled "Analysing the Maltese investor behaviour in the local stock market during the years 1999 – 2002."

Instructions: During the period 1999 – 2002, the local stock market registered its first bull and bear market in its history. Could you please help me out to understand what happened during this period, through your own personal experience? Kindly fill up accordingly and tick where appropriate.

This questionnaire should take no more than ten minutes of your time. This anonymous survey is being distributed to seven stockbroking firms in Malta. While thanking you for your consideration and help, I take this opportunity to remind you to return this questionnaire using the attached pre-paid addressed envelope. I would be happy to provide you with a copy of my finalised dissertation at your specific request, in the event that you participate in this survey. Please note that the questionnaire, duly completed is required by **9th March 2004**. My I assure you that as required by the Professional Secrecy Act, the data you disclose to me will not be shown to third parties and figures will be aggregated and hence only totals for the investment service sector as a whole will be shown.

Should you require further assistance, please do not hesitate to contact me.

Yours Sincerely

Alexander Mangion

STOCKBROKING FIRMS' SURVEY

QUESTIONNAIRE

INVESTORS' BEHAVIOUR

1. Do investors:

Buy on rumour?	Yes (100%)	No (0%)
Try to predict the Market?	Yes (71%)	No (29%)
Fail to inform their financial representative of any change in their risk tolerance?	Yes (100%)	No (0%)
Get influenced by foreign stock markets developments?	Yes (57%)	No (43%)
Admit their own mistakes?	Yes (14%)	No (86%)

2. Do investors look at and analyse the following before taking a decision?

P/E Ratio	Yes (14%)	No (86%)
Dividend Yield	Yes (43%)	No (57%)
Price/Book Value	Yes (14%)	No (86%)
New prospects for the company	Yes (71%)	No (29%)

STOCK-BROKING FIRMS ROLE

3. What type of fundamental analysis tools does your company use?

	Almost Always	Usually	Sometimes	Seldom	Hardly Ever
Company's Net Asset Value	(57%)	(29%)	(14%)	(0%)	(0%)
Estimate of 'true' value of P/E ratio	(71%)	(29%)	(0%)	(0%)	(0%)
Dividend Yield %	(71%)	(29%)	(0%)	(0%)	(0%)
Price/Book Value Ratio	(100%)	(0%)	(0%)	(0%)	(0%)
Other. Please specify: _____					

4. What type of technical analysis tools does your company use?

	Almost Always	Usually	Sometimes	Seldom	Hardly Ever
45 degree Bullish Support line	(0%)	(0%)	(0%)	(0%)	(100%)
Support and Resistance Levels	(57%)	(0%)	(29%)	(0%)	(14%)
Head and Shoulders Theory	(14%)	(0%)	(14%)	(0%)	(72%)
Figure Charts	(43%)	(14%)	(29%)	(14%)	(0%)
Other. Please specify: _____					

5. During 1999, do you think that financial advisers (particularly CIS Managers) caused part of the mania as they did not want to be left out of the market?

Yes (57%)	No (43%)
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6. Some IPOs have underperformed from their day of issue. What caused investors to buy these stocks?

Ongoing Mania (86%)	Manipulation of Information by Underwriters (14%)
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7. How important were the following news regarding the stock market crash?

	Very Imp	Not So Imp	Not Imp
The Minister of finance speech that the stock market was inflated a lot.(Feb 2000)	(43%)	(29%)	(29%)
Privatisation process was taking long	(29%)	(43%)	(29%)
Some investors were cashing their profits	(57%)	(29%)	(14%)
New tax on Collective Investment Schemes	(29%)	(14%)	(57%)
Other. Please specify: _____			

8. Did you predict a fall in the market by means of: *(Tick each box where appropriate)*

Technical Analysis	Yes (43%)	No (57%)
Fundamental Analysis	Yes (71%)	No (29%)
Ongoing talks	Yes (14%)	No (86%)
Personal Feeling	Yes (43%)	No (57%)
Market Psychology	Yes (57%)	No (43%)
Investors were on a short term investment horizon	Yes (14%)	No (86%)

LOOKING FORWARD

9. Have investors returned to the market, by and large?

Yes (57%)	No (43%)
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10. What is needed to be done to regenerate confidence in the local stock market?
(Rank your preferences with 1 being the most important and 6 the less important)

Better Investor Education	Average: 2.4
Identifying new investment opportunities	Average: 4.4
More financial news on the media	Average: 4.3
More companies listed on the MSE	Average: 3.3
Reduce Tax Burden on Investment Schemes	Average: 3.7
Companies publish results more frequently (every 3mths)	Average: 2.9
Other. Please Specify: _____ _____	

GENERAL PUBLIC'S SURVEY

COVERING LETTER

Alexander Mangion
'Notre Dame',
St. Paul Street,
Zurrieq.
Tel.
99477077

Dear Sir/Madam

You have been randomly selected to take part in my dissertation research entitled "Analysing the Maltese investor behaviour in the local stock market during the years 1999 – 2002."

Instructions: During the period 1999 – 2002, the local stock market registered its first bull and bear market in its history. Could you please help me out to understand what happened during this period, through your own personal experience? Kindly fill up accordingly and tick where appropriate.

This questionnaire should take no more than ten minutes of your time. This anonymous survey is being distributed to 300 households in Malta. While thanking you for your consideration and help, I take this opportunity to remind you to return this questionnaire using the attached pre-paid addressed envelope. Please note that the questionnaire, duly completed is required by **9th March 2004**.

Should you require further assistance, please do not hesitate to contact me.

Yours Sincerely

Alexander Mangion

GENERAL PUBLIC'S SURVEY

QUESTIONNAIRE

GENERAL VIEW

1.

Responses: 168

Have you bought/sold shares/ Maltese Collective Investment Schemes during the 1999 – 2002 periods?	Yes (31.5%)	No (68.5%)
If No, you have completed this questionnaire. Please return the questionnaire in the enclosed envelope. Thank You.		
Are you satisfied with the rate of return from your investments?	Yes (35.85%)	No (64.15%)
Was this the first time you traded on the market?	Yes (69.81%)	No (30.19%)

INVESTMENT DECISION

2. Your decision to invest in the local stock market was based on:

Responses: 53

Professional financial Advice	Yes (64.15%)	No (35.85%)
Positive experience of friends/family members	Yes (62.26%)	No (37.74%)
Personal Feelings	Yes (54.72%)	No (45.28%)
Personal Calculations	Yes (24.53%)	No (75.47%)
Other. Please specify: _____ _____		

3. Which of the following calculations have you made before buying the shares?
(Tick each box where appropriate)

Responses: 13

Dividend Yield	(100%)
Price/Earning Ratio	(61.54%)
Net Asset Value of Share	(46.15%)
Price/Book Value	(30.77%)
No calculations	
Other. Please specify: _____	

4. Did you:

Responses: 53

Have a stop-loss policy to limit your losses	Yes (24.53%)	No (75.47%)
Have a long term investment horizon	Yes (71.70%)	No (28.30%)
Knew about the risks of your shares	Yes (88.68%)	No (11.32%)
Have some financial education background	Yes (33.96%)	No (66.04%)

Market Downturn

On 24th March 2000 the stock market began to fall constantly.

5. From this date till end 2002, have you bought/sold any holdings?

Responses: 53

Bought (9.43%)	Sold (30.19%)	Bought & Sold (52.83%)	Done Nothing (7.55%)
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6. Your decision to sell/buy was based on: (Tick each box where appropriate)

Responses: 49

Professional Advice	(44.90%)
Negative performance	(48.98%)
To cut your losses	(36.73%)
Need for urgent cash	(32.65%)
Personal feelings that Market will continue to fall	(83.67%)
Other. Please specify: _____	

7. From the day of sale onwards, have you traded again?

Responses: 49

YES (57.14%)	NO (42.86%)
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PERSONAL VIEW

8. You follow the local stock market through: *(Tick each box where appropriate)*

Responses: 53

Financial News on TV	(66.04%)
Financial Newspapers	(60.38%)
Do not follow	(13.21%)
Other. Please specify: _____	

9. What is your view of the local stock market? *(Tick each box where appropriate)*

Responses: 53

It's there for the rich people	(18.88%)
It's there to take off your money	(30.19%)
It's a risky place to invest your money	(84.91%)
You can earn good profits from it	(64.15%)
Other. Please specify: _____	

10. What is your view about stockbrokers in Malta? *(Tick each box where appropriate)*

Responses: 53

They give good investment advice	(60.38%)
They give bad investment advice	(39.62%)
They are efficient with your needs	(83.02%)
They are inefficient with your needs	(16.98%)
They lack responsibility	(50.94%)
They are trust-worthy	(49.06%)
Other. Please specify: _____	

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