DO STRUCTURED PRODUCTS HAVE AN IMPACT ON TURKISH INVESTORS' RISK & RETURN PROFILE?

Mustafa Kemal ÖZMEN
104664020

İSTANBUL BİLGİ ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ
ULUSLARARASI FİNANS YÜKSEK LİSANS PROGRAMI

Assist. Prof. Dr. Cenktan ÖZYILDIRIM
2008

Do Structured Products have an impact on Turkish investors' risk & return profile?
Yapılandırılmış Ürünlerin Türk yatırımcısının risk & getiri profili üzerinde etkisi var mı?

Mustafa Kemal ÖZMEN
104664020

Assist. Prof. Dr. Cenktan ÖZYILDIRIM	: ....
Prof. Dr. Oral ERDOĞAN	: ....
Okan AYBAR, MA	: ....

Tezin Onaylandığı Tarih : ....

Toplam Sayfa Sayısı:

Anahtar Kelimeler (Türkçe)	Anahtar Kelimeler (İngilizce)
1) Yapılandırılmış Ürünler	1) Structured Products
2) Optimal Portföy	2) Optimal Portfolio
3) Risk getiri profili	3) Risk return profile
4) Sharpe rasyosu	4) Sharpe ratio
5) Etkin sınır	5) Efficient frontier

Özet

Bu çalışmada, yapılandırılmış ürünlerin Türk yatırımcısının risk & getiri profili üzerinde bir etkisi olup olmadığı araştırıldı. Bu bağlamda; hisse, bono ve yapılandırılmış ürünlere ait tarihsel zaman serilerinin, optimal setlerin ve Sharpe rasyolarının hesaplanmasında ve analizinde kullanıldığı ampirik bir çalışma gerçekleştirildi. Elde edilen sonuçlar gösterdi ki uzun zaman döneminde elde edilen gözlemler araştırma için daha uygundur. (zamanlamaya daha az bağımlı) Araştırma sonucunda elde edilen ve diğer uygun setlere göre daha yüksek Sharpe rasyosuna sahip olan optimal portföy %10 yapılandırılmış ürün, %90 bonodan oluşmaktadır. Çalışmanın sonuçları göstermiştir ki yapılandırılmış ürünler gerçekten de bireysel yatırımcılar için risksiz yatırım araçlarından daha riskli yatırım araçlarına bir geçiş yolu olabilecektir. Hatta riskten kaçınan yatırımcılar bile yapılandırılmış ürünleri kullanarak %100 sabit getirili araçlara yatırım yapmak yerine zaman içinde kısmen bile olsa hisse senetlerine yönelik yatırımlara yönelebilecektir.

Abstract

In this study, it is tried to be investigated whether structured products have an impact on Turkish investors' risk & return profiles. In this respect, an empirical study has been made where historical time series of equity, bonds and structured products were used for analysis and for calculation of optimal sets and Sharpe ratios. The results showed that observations on a longer time horizon are more relevant for research. (less timing dependence) The optimal portfolio found in the research, that is yielding the highest Sharpe ratio compared to other feasible sets, consists of 10% structured products and 90% bonds. The findings in the study indicate that structured products indeed may be a passage for individual investors to shift from risk free to more risky investments. Even risk averse investors might consider to shift gradually from 100% fixed income investments to partially taking exposure to equity, using SP.

Acknowledgments

I would like to express my gratitude to my dissertation supervisor Assist. Prof. Dr. Cenktan Özyıldırım, for his guidance and contribution. I feel indebted to him for his support, encouragement, patience and understanding in every stage of this study.

I would also like to express my special thanks to Jeroen Verstraete for his continued support and invaluable generosity in sharing his time and sources.

I am indebted to my sister and my friend Ömür for their continued help and support.

Finally, I dedicate this work to Ayşıl who always supports, encourages and helps me.

Table of Contents

List of Tables

List of Figures

1. INTRODUCTION

Since mid-2007, the world economy has been suffering from the global credit crunch which was derived from non-performing sub-prime mortgage loans in the US and its adverse effects on global liquidity conditions and financial stability. Following the huge write-offs from giant financial institutions related to sub-prime mortgage loans, ongoing default news coming from funds, retail and investment banks have increased the global uneasiness in financial markets. Besides, the recession concerns over US economy, hike in commodity prices and each countries' internal political & financial factors have also contributed to a negative mood from time to time in the global economic outlook. All these uncertainities and changing risk perception in the markets have directed investors in emerging markets to alternative financial instruments which limit their risk as well as providing returns.

Among these alternative financial instruments, structured products are widely used in developed markets up to now. These instruments have presented an important growth and rising popularity among investors in the last decade following the bad market conditions in the world at the beginning of the new era. 'The UCITS directive' (2002) mentioned that structured products, which often offer a capital protection or guarantee and protect investors from the market volatilities, appeared first in mid 1980s.

The market for structured funds is a relatively new market within the asset management industry and took the investors' awareness in the early '90s in continental Europe with the first Fixed Income-linked products. Equity index linked structures quickly followed and baskets of individual stocks as underlying saw an increased interest from 2002 onwards. The correlation play that was present with baskets of stocks led automatically to the establishment of multi-asset structures or hybrids where a combination of different asset classes is used as an underlying for structured funds. These products newly take place in emerging markets due to improved market conditions and increasing risks in financial markets.

Besides market dynamics, the development speed of these new investment tools depends on various local factors in each country as it was mentioned in EFAMA's position paper. (Matthias & Marras 2008) EFAMA, European Fund and Asset Management Association, is the representative association for the European investment industry. In this report, Matthias and Marras (2008) emphasize that:

> As the statistics provided by the Commission in Annex 2 of the Call for Evidence show developments regarding substitute products vary from country to country: in some countries life insurance products are particularly strong; in other countries structured products are gaining market share over other products, notably investment funds. The reasons behind these trends are different and depend very much on the national environment.

> Undoubtedly, often there are tax reasons but it also can not be denied that the different regulatory treatment has significant impact on the behaviour of distributors. (4)

The competition against traditional investment instruments became fierce following the initiation of structured products. Hence, investors' risk & return profiles have changed due to either changing global risk perception or local factors. In EFAMA's quarterly statistical release, it was highlighted that "Enhanced competition from banking deposits and structured products against the background of rising interest rates continued to be felt strongly throughout Europe" (Delbecque 2008: 2).

Additionally, another report ('EFAMA Fact Book' 2007) noted:

> On average, European households held 11.5 percent of their financial wealth in investment funds in 2006, against 11.3 percent in 2002. The situation is very diversified across Europe. Whereas households in Sweden and France have increased their holdings of investment funds above 20 percent in recent years, the share of funds in household savings fell in Italy and remained unchanged in Germany because in these countries the competition with structured products is particularly heavy. (1)

Mathias Bauer, the President of EFAMA, also argued that "This evolution underlines the need to close the gap separating UCITS from less transparent savings products, so as to allow households to make well-informed choices between alternative savings products." (qtd. in EFAMA Fact Book 2007: 1).

As a result of the fierce competition against traditional instruments, the global market size of structured products have been increasing rapidly. In terms of market size, structured products are more widespread in Europe compared to US and other markets. The increasing number of risk-averse investors in Europe triggered the European retail structured products market. The European market saw its biggest boom after 2003 when markets were recovering and attracting renewed interest from investors. As of 2005 year-end, European retail structured products market ranked 1st in terms of worldwide sales. It is estimated that the gross sales in the European retail structured products market was realized at €142bn (USD168bn), up by 22% and 53% compared to 2004 and 2002, respectively (Table 1.1). The European market is estimated at above €150bn at the end of 2006 and growing 10% per annum (growth coming from emerging Europe). ('Market Overview' 2008)

The flexibility and increased availability of structured funds in Europe led to a gradual worldwide expansion of products that were, by that time, recognized a new asset class. Worldwide exports of knowledge from European banks to Asia and US created similarities in product launched worldwide.

Market	2002 €bn	2003 €bn	2004 €bn	2005 €bn	Change ('04 - '05)
Italy	23.0	22.0	21.4	27.9	30%
Germany	7.0	12.0	16.0	23.3	46%
Belgium	10.2	12.7	15.3	20.4	33%
Spain	14.0	20.0	18.6	20.0	8%
France	12.4	13.8	13.3	14.6	10%
UK	9.0	8.0	8.2	7.4	-10%
Netherlands	2.0	5.0	8.0	10.0	25%
Ireland	1.5	2.0	2.5	3.5	40%
Scandinavia	13.5	12.7	13.0	14.0	8%
Total	**92.6**	**108.2**	**116.3**	**142.1**	**22%**

Source: Market Overview 2008, Structuredretailproducts.com

Table 1.1: Gross Annual Retail Tranche Product Sales by European country (€bn)

In the Americas, legislation was only recently adapted in 2003-2004. In terms of gross sales, the retail structured products market in North America reached USD84bn in 2005, USD75bn of which sold in US. Although the US retail structured products market is larger than the Canadian market in absolute terms, it lags behind the latter in terms of maturity and sophistication since Canadians have a far bigger appetite for packaged products than people in US. Likely, the US market also lags behind the European retail structured products market in terms of sales. The reason behind the slower development of the US market compared to Canada and Europe is that US investors have traditionally invested in equity via mutual funds and stocks. Therefore, they prefer direct investments compared to partial exposure via structured products. Nevertheless, US has been growing strongly in recent years, and given the size of its economy as a whole has the potential to become a major international player. ('Market Overview' 2008)

The size of the Asian structured products market is estimated at approximately USD61bn in 2006, dominated by Japan, but Emerging Asia is catching up. Again, foreign banks are the main players. The regulations and market characteristics are significantly different among Asian countries. Despite these differences, distribution networks dominated by local banks and inexistence of a market for independent third party advice are common features in Asia. The structured products have grown rapidly throughout the region between 2002 and 2004. Thereafter; a slow down was realized in sales. The slow down was mostly due to increasing stock prices drawing investors towards conventional mutual funds and outright equity investments, while hikes in interest rates have increased the attractiveness of straightforward bonds and deposits. ('Market Overview' 2008)

To sum up, the reasons for the increased worldwide importance of structured products are obvious. Many retail and institutional investors went form surpluses to deficits in the bear markets of 1999-2003 and most recently in August 2007 and early 2008. Addressing these deficits poses a dilemma: need for higher return involved in higher risk taking, but investors became more risk averse. Traditional asset class investments can not solve this dilemma. With the new sophisticated regulations like UCITS III came in force, allowing increased use of derivatives, structured products became a popular investment vehicle throughout the world.

In Turkey, the market for structured funds is a new market with the initiation of the first 4 products in 2007. Thereafter, structured products became a hot issue and many financial institutions including asset management companies and investment banks are working to launch new products. “The size of the market is very small at present (estimated at approximately YTL100mn) but it is expected to absorb around 10% of current deposit savings total”, said Jeroen Verstraete, who is Director of Structured Products for EEMEA region in Fortis Investments. (Verstraete 2008) He also added that Turkish investors presently heavily rely on B-Type mutual funds due to the availability of high interest rates. However, with the initiation of new alternative products, i.e structured products, investors may prefer to lengthen their investment maturities without taking additional risks in order to differentiate their returns. In brief, the alternative products may be a good passage for investors to shift from risk-free products to the more risky ones. Similarly in Turkey, investors might tend to invest in these new products rather than B-Type funds, in the case where a declining trend in interest rates would continue. (Verstraete 2008)

In this study, the question which will be tried to be answered is “Do Structured Products have an impact on Turkish investors’ risk & return profile?”. To do this, first of all, the literature about structured products will be reviewed and the methodology of this study will be presented. Later on, the average portfolio of a Turkish investor will be analyzed. Thereafter, structured products and capital protection funds will be introduced and discussed. Then, emprical results and concluding remarks will be presented after the presentation of histograms, risk-return distributions, feasible & efficient sets and sharpe ratios. In this part, traditional portfolios and the portfolios involving structured products will be compared by means of presenting the changes in investors' risk & return profiles. Finally, this analysis should be sufficient to answer the above mentioned question.

2. LITERATURE REVIEW

Since the market for structured funds is a relatively new market within the asset management industry throughout the world, there is a lack of academic publications in the literature. Up to now, most findings are market-oriented, generally prepared by financial institutions. The statistical data regarding the structured products is also scarce. Hence, although the academic publications directly related to structured products will be tried to be presented as far as possible, the literature for the whole fund industry (mutual funds, hedge funds, etc.) and non-academic studies, especially published by global market participants, will be used in this work. However, only a limited number of studies which are comparably more related to structured products will be reviewed in this part since finance literature offers a wide range of working areas for funds. At the end of this section, risk & return profile concept will also be reviewed.

Donselaar (1999) dealed mostly with guaranteed returns in pension funds and insurance products, but he mentioned capital protected funds as well in his report in 1999. The report provided risk analyses for Dutch financial products with some kind of guaranteed return for the customer. The study was started by a survey conducted for Dutch financial institutions which offer equity-linked consumer products. The paper focused on investment funds in which some kind of minimum return guaranteed and mainly offered by insurance companies as an option within unit-linked products. In his study, the author provided the background of unit-linked products. He applied a survey which was performed under 98 financial institutions. He counted a total 60 participants of which 48 were offering unit-linked investment funds. Donselaar had found the following:

> The survey showed that most insurers do not have an investment strategy that focuses on the guarantees. This means that in these cases extra charges to cover the associated risks are necessary. These explicit charges do not affect the fund performance, but do affect by nature the total return for the customer. This has at least one advantage: the consumer is much more aware of the cost of guarantees and will be able to consider his needs better. The advantage for the insurer is that he has better monitoring possibilities by analysing the specific charges and provisions against additional payments based on the guarantees given. In this way we can avoid that policyholders with guarantees are subsidised by policyholders without, which would be a bad example of insurance solidarity. (203)

In 2003, Lancaster and Prince (2003) published a report for Structured Products Research team of Wachovia Securities. In their report, they focused on CPPI (Constant Proportion Portfolio Insurance) which is a strategy designed in order to mimic the behavior of option-based protection without the explicit need for option contracts. They provided a numerical example and explained the risk factors involved in these securities. In their report, first of all, the benefits of principal-protected securities were defined. They mentioned how the principal protection was provided by static and dynamic portfolio hedging with riskless assets. Then, they introduced CPPI by giving an asset allocation example. Thereafter, they mentioned protection provider risk, contractual risk, liquidity risk, accelaration risk, and structural risk as certain risk factors. In the conclusion part, they emphasized that "principal-protected securities can be attractive investments for investors seeking to enhance the yield of their portfolios through exposure to alternative asset classes yet wanting the comfort that their principal investment is protected" (Lancaster 2003: 7).

In an article[1], structured products were described as funds which are linked to an asset class for a fixed period or an index and which use derivative instruments to provide a return and minimize the downside risk to investors' capital, sometimes with 100% capital protection guaranteed. By referring to some market players' comments, the benefits of structured products were described as below:

- availability of getting exposure to risky and volatile assets
- the opportunity of adding a further layer of diversification to protect portfolios
- offering of potential for cash-beating, equity-like returns with no risk to capital
- consistency of returns

[1] "Who's afraid of structured products?", published in Telegraph in 2007 by James Phillipps http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2007/04/30/cmfund30.xml

On the other hand, structured products were also critized in this article. Accordingly, structured products capture the price return of an index but not the dividends, which can contribute significantly to a market's total return. Additionally, they are known as costly and opaque. They are also treated as being not transparent enough due to lack of knowledge of how their returns are calculated. It was also reported that structured products are also not dissimilar to precipice bonds which caused several investors' misery at the beginning of the new era. The article also referred to an academic study conducted by Edhec in France. According to this study, all institutions, except the most risk-seeking ones, have to hold a proportion of structured and capital protected investments in their portfolios, with the most risk averse weighting being as high as 80% of the portfolio. The article ended with by saying that "the key for investors with any structured product, is to check the level of capital protection. If you do not want to lose a penny, double-check that your capital is completely safe no matter how sharply the markets fall."

With respect to alternative investments in general, AIMA (Alternative Investment Management Association) published an updated version (originally published in 1998) of the summary of "Alternative Investments in the Institutional Portfolio" in 2002. (Schneeweis, Karavas & Georgiev 2002) In this study, they provided an analysis of the risk & return benefits of several hedge funds and managed futures investments. They also provided the risk & return benefits of other alternative investments, such as commodities, real estate, and private equity. They presented these investments as stand-alone investments or as part of an investor's diversified stock-bond portfolio. They constructed risk & return performance of portfolios by adding alternative investments to established U.S. stock and bond portfolios, while evaluating both traditional Markowitz efficient frontiers with and without investment restrictions. While conducting the Markowitz efficient frontier determination, they used alternative methods of risk & return forecasting, including historical returns and the construction of ex-ante return forecasts. The results of the analyses related to Sharpe ratios of several efficient frontier portfolios implied that an allocation of at least 10-20% to both traditional alternative investments and managed futures and hedge funds may be deemed appropriate, depending on several assumed constraints such as required stock and bond investment. The results also indicated that alternative investments should be included with traditional stock and bond investment to attain the max. risk & return benefits. Hence, according to them, traditional portfolios should be supplemented with managed futures and hedge fund products as well as more traditional alternative investments like commodities, private debt or equity investments to attain the max. risk & return benefits. As a conclusion, they presented the benefits of adding managed futures and hedge fund products to traditional stock, bond, and traditional alternative investment portfolios. Accordingly, a portfolio which is formed by hedge funds and managed futures, offers improved risk & return opportunities when considered as additions to a traditional stock and as well as mixed asset portfolio, like stocks, bond, and traditional alternative investments (private debt, private equity, etc.) both under past market environments and forecasted return relationships consistent with general market conditions. Moreover, the benefits of a that kind of portfolio have a greater impact on risk minimization and return maximization under alternative market conditions that are extreme low & high returns of the stock and bond portfolio. That kind of portfolio also offers managed portfolio returns which are not attainable via other traditional stock and bond investments and/or traditional alternative investments. Lastly, a portfolio including hedge funds and managed futures are not sensitive to the globalisation of the stock and bond portfolio. Thus, traditional alternative investment tools should be supplemented with other futures & options based managed futures and hedge fund products to attain the max. risk & return benefits of alternative investment products.

In an another updated version publication of AIMA in 2002, namely "The Benefits of Managed Futures" (originally published in 1996), Schneeweis and Georgiev (2002) analyzed the role of managed futures in order to maximize risk/return ratio in a diversified portfolio. The findings of this research study showed that the appropriateness of ensuring that managed futures have a place in any well-diversified portfolio. According to this research, the main remarks regarding managed futures were:

- Reduce portfolio volatility risk

- Enhance portfolio returns in economic environments in which traditional stock and bond investment media offer limited opportunities, and
- Participate in a wide variety of new financial products and markets not available in traditional investor products. (2)

In this study, they presented the growth and benefits of managed futures by analyzing the risk and return performance of managed futures. Accordingly, over 1990-2001, investing in a portfolio of commodity trading advisors (e.g., Zurich CTA$) provides stand-alone risk & return benefits generally similar to existing U.S. and world stock and bond investments. They illustrated the benefits of managed futures in diversified portfolios by adding Zurich CTA$ to an S&P 500, Lehman Brothers Bond Index, as well as an S&P 500 and Lehman Brothers Bond Portfolio. Accordingly, efficient frontiers derived from these portfolios showed that managed futures offer the investor an increased return/risk ratio when considered as an addition to widely diversified asset portfolios.

Although there is a lack of academic findings about structured products in the finance literature, there are several studies related to hedge funds and mutual funds in general. In 2000, Fung and Hsieh (2000) measured the market impact of hedge funds. In this study, hedge fund exposures were estimated during the historical major market events. Throughout the whole study, Fung and Hsieh used ‘hedge funds’ term for funds that include commodity funds. First of all, the large hedge funds were identified by searching through various databases, including databases from Tass, the Investment Fund Newsletter from the Republic National Bank (Suisse), the MAR hedge funds and commodity funds published in Barron’s, and the internet information put out by Micropal and Nelson. Then, Fung and Hsieh defined a large hedge fund to be a single fund or a group of funds which is operated by the same manager using similar strategies, with more than US$1bn of AUM. Thereafter, they classified the styles of hedge funds. Lastly, they mentioned that it was instructive to observe the similarity of the returns within styles, and the differences of the returns across styles, during various major market events, including 1987 stock market crash, 1994-95 Mexican crisis, 1997 Asian currency crisis, etc. In the conclusion, Fung and Hsieh found that hedge funds had significant exposures and were in a position to exert substantial market impact in some episodes. On the other hand, hedge fund exposures were insignificant, either in absolute terms or relative to other market participants in other episodes. Being valid for all episodes, Fung and Hsieh found no evidence of hedge funds using positive feedback trading strategies. In their findings, there was also few evidence that hedge funds systematically caused market prices to deviate from economic fundamentals.

In 2002, Agarwal and Naik (2002) characterized both the linear and non-linear risks of hedge fund strategies by using BUY & HOLD and option-based risk factors. To do so, they used a two-step method. First of all, they estimated hedge funds' factor loadings by using standard asset classes' returns and options on them as factors. Agarwal and Naik (2002) constructed replicating portfolios which best explained the in-sample variation in hedge fund index returns. Then, they observed how well these replicating portfolios captured the hedge funds' out-of-sample performance. They applied these analyses both at the index level as well as at an individual level. While analyzing hedge funds, their finding was that it was important to allow for non-linear risk-return relation. Agarwal and Naik (2002) observed that hedge fund strategies exhibited returns similar to those from writing a put option on the equity index. The findings for non-linearities across multiple strategies suggested that these events were not statistical outliers, yet represented important risks borne by hedge fund investors. They also compared and contrasted the tail losses of portfolios which were constructed using mean-variance framework and mean-conditional VaR framework. They found that using the traditional mean-variance framework substantially underestimated the tail losses and this underestimation was most severe for portfolios that had low volatility. At the end, they also compared and contrasted hedge funds' long-run systematic returns with those observed during recent period. They concluded their paper with saying that "almost across all hedge fund indexes, we find that the long-run returns are lower, the long-run volatilities are higher and the long-run tail losses are larger compared to those during the recent period.” (Agarwal & Naik 2002: 30)

In 4Q 2006 economic review of Federal Reserve Bank of Atlanta (Chan et al. 2006), the differences in risk and reward profile of hedge funds from more traditional investments were argued, and it was stated that the differences may have potentially significant implications for systemic risk. In this review paper, the impact of hedge funds on systemic risk was considered via examining the unique risk & return profiles of hedge funds, at both the individual-fund and the aggregate-industry level, and proposing some new risk measures for hedge fund investments. The paper focused on the two main themes, which were illiquidity exposure and timevarying hedge fund correlations, both of which were intimately related to the dynamic nature of hedge fund investment strategies and their risk exposures. The authors tentatively made inference as “massive fund inflows have had a material impact on hedge fund returns and risks in recent years, as evidenced by changes in correlations, reduced performance, and increased illiquidity as measured by the weighted autocorrelation.” (Chan et al 2006: 74) It was also mentioned that:

> The risks facing hedge funds are nonlinear and more complex than those facing traditional asset classes. Because of the dynamic nature of hedge fund investment strategies and the impact of fund flows on leverage and performance, hedge fund risk models require more sophisticated analytics and more sophisticated users. (75)

The Frydenberg, Lindset and Westgaard (2007) analyzed return statistics of hedge funds between 1994 and 2005. They examined several statistics of various hedge fund style investments. In this study, they used global bonds and equity investment indices and hedge fund indices from CSBF/Tremont, covering the time period between 1994 and 2005. As a finding, they mentioned that:

> ... some of the hedge funds seem to have a higher mean return and a lower standard deviation than the equity market. The index returns distributions are not normal and exhibit negative skewness and positive excess kurtosis. With the exception of some styles, monthly hedge fund index returns have a high positive correlation with the stock market. Most styles are nearly uncorrelated with the bond market. The monthly returns of many hedge fund indices exhibit significant positive first-order autocorrelation. (Abstract)

The comparison of equity and bond portfolios and the portfolio selection are widely discussed in the finance literature. For instance, Miyazaki (2005) proposed a portfolio selection model which operated under long-term risk constraints in order to understand why investors steered clear of Japanese equity markets, preferring to leave funds in bank deposits and in the bond market. Assuming that the long-term risk remains at a low level, the aim of this research is to answer the following three questions:

1. How do they decide a target portfolio return?

2. Which is the more attractive, bonds or equities?
3. In regard to equity investment, what risk-return profile is preferable?

The paper proposes a portfolio selection model which evaluates bonds and equities and provides a number of numerical examples to demonstrate its effectiveness. In order to answer the third question, at the end, Miyazaki (2005) set the risk & return profile of an equity portfolio so as to maximize the target return under the long-term risk constraint. In his paper, he discussed the trade-off between variance and skewness and investment under a long-term risk constraint. In the conclusion, he judged the results that he derived from his model. Accordingly, when the yearly equity returns are below 7-8%, investors prefer bonds over equities. He concluded his paper with saying that:

> ... there is a distinct advantage in adopting NIG (Normal Inverse Gaussian) for the return distribution. To aid in the application of our model, we have presented an algorithm for practitioners, and are confident that our model will add value when building portfolios for investors with low long-term risk tolerance. (915)

In Turkey, there is no study discussing structured products or impact of an alternative investment instrument on a specific market. Most of Turkish publications have dealed with mutual funds. Therefore, two publications which are dealing with the mutual funds and the relationship between risk & return in portfolio management are reviewed in this study. Guven (2006) analyzed the mutual funds in Turkish financial markets in his MBA dissertation. He searched the historical development of mutual funds via presenting their types and features. Guven (2006) also compared a mutual fund with other investment instruments and analyzed the situation of mutual funds in Turkish financial markets. He tried to explain risk & return features of mutual funds. At the end, he concluded with saying that "type A mutual funds were the high risk funds compared to the type B mutual funds and the other investment instruments". (Guven 2006: 104) He also presented detailed results for the mutual funds of 6 big banks in the market.

Another study which was conducted by Moustafa (2007) dealed with the two basic asset pricing theories, namely CAPM (Capital Asset Pricing Model) and APT (Arbitrage Pricing Theory). He examined these theories via analyzing the relationship between risk & return. In this work, Moustafa chose a portfolio by using the adjusted returns of ISE 30 and ISE 50 companies in 2005. Then, he calculated the risk & return of the portfolio. Thereafter, he causally formed portfolios from ISE 30 and ISE 50 indices and measured the portfolio performances by using Sharpe ratio. The findings showed that portfolio diversification allowed investors a lower level of risk along with increased expected return. The different and new investment alternatives for different investor profiles could be created. Moustafa concluded his study with saying that each investor had different risk & return profiles, therefore, it would be better to construct and manage a portfolio by considering the investors' risk and return profiles. It would also provide the determination of an efficient and optimal portfolio for the manager.

The concept of risk & return profile and the attitude of investors toward risk are analyzed via utility function. One of the properties of utility function is an assumption regarding the taste of an investor for risk. An investor might be averse to risk, neutral toward risk or risk seeking. Risk aversion refers to an investor reject a fair gamble since the disutility of the loss is greater than the utility of an equivalent gain, implying the second derivative of utility with respect to wealth is negative. Risk neutral people, however, are indifferent to fair gamble, implying a zero second derivative. Finally, risk seeking means that a person would select a fair gamble, implying that he/she has the utility function with positive second derivative. There are two famous studies in the literature about these concepts.

The first study was conducted by Friedman and Savage (1948). In their study, they aimed to suggest that the individuals' reactions to risk can be rationalized via a rather simple extension of the orthodox utility analysis. They attempted to provide a crude empirical test by bringing together observations regarding the behavior of individuals in choosing among alternatives involving risk. According to them, individuals should come to a decision among other alternatives by considering their degree of subjection to risk. The most common examples are insurance, in which people are choosing certainty in preference to uncertainty, and gambling, in which people are choosing uncertainty in preference to certainty. In their paper, Friedman-Savage Double Inflection Utility Function indicated that it is not necessarily true that the utility function of an individual has the same kind of curvature everywhere, e.g. levels of wealth. For instance, according to them, people exhibit risk averse behavior at high income levels as well as at low income levels. However, at middle income levels, people are risk seeking.

On the other hand, Markowitz (1952) disagreed with Friedman and Savage that people have such doubly inflected utility curves. He emphasized that people at low income levels also accept a gamble that may take them to high income levels. However, people with high income levels do not pay a premium against being taken down to low income levels, for instance, those kind of people do not take insurance against huge losses with low probability. Markowitz also mentioned that people who are extremely rich never take a fair gamble. Markowitz introduced “changes in income” term instead of “income levels” which was expressed by Friedman and Savage. He also introduced “normal income” term which is whether poor, rich or moderate. According to him, the rest reflects deviations from this average income. In brief, Markowitz solved lottery-insurance paradox without dealing with complex implications of the original hypothesis developed by Friedman and Savage.

3. DATA & METHODOLOGY

In this study, the main objective is to evaluate the impact of structured products on Turkish investors' risk & return profiles via analyzing histograms, risk-return distributions, feasible & efficient sets, and Sharpe ratios of synthetic portfolios which are theoretically constructed based on two-year and four and half-year history.

First of all, the historical time series for different asset classes will be analysed for Turkish financial markets. ISE 30 index is used for the Turkish equity market. The theoretical bond index is constructed using the 1 year TRLibor (TRLIB1Y) interest rate. The most standard (plain vanilla) Structured Product which involves investments in a zero coupon bond (deposit yielding 1 year Libor) and a call option on ISE 30 index, was constructed. Since the 1 year TRLibor interest rate is used to construct the historical SP series, the same interest rate is used to replicate bond investments. Throughout the study, the name bonds investments is used to refer to a synthtically created time series which involves investing for 1 day against the TRLibor interest rate. In this way, an index is created reflecting fixed income investments and is therefore called 'bond investments'. It does however not indicate investments in government bonds, so there is also no duration to take into account in the calculation. Moreover, since a zero coupon bond's duration is equal to its maturity, comparing 1 year returns does not create any mismatch. Because of the lack of historical data for existing structured products in Turkey, a series of hypothetic products was first created and then used for return and risk analysis (backtesting). In other words, an assumption was made as to how financial markets would have looked like if structured products would have existed in previous years. In order to construct the Structured Product, financial theory was applied to calculate option prices based on historical data.

The average historical returns on these asset classes (Equity, Bonds and Structured Products) and the average volatilities on those returns will be compared for periods of a 4.5 year and a 2 year time horizon. For the comparison, calculation methods of financial theory are applied: return histograms, risk- return comparisons, feasible & efficient sets, and Sharpe ratios.

The result should be that a portfolio with structured products in it is more optimal (i.e. higher return for the same amount of risk or lower risk for the same amount of return), i.e. a higher Sharpe coefficient.

4. WHAT IS THE AVERAGE PORTFOLIO OF A TURKISH INVESTOR?

In the capital markets of developed countries, there is a huge diversificiation of financial assets. The product diversification is so crucial for the capital markets since it fulfills both investors' and issuers' financial needs. Additionally, the financial industries are healthier in the countries where financial products are more developed and diversified. Since risks and investments are dispersed to different vehicles, it will be easier to cope with a financial crisis. In brief, the systematic risk of a country reduces more as the variety of assets are enhanced in the markets.

The systematic risk of a country can be reduced by financial institutions via the use of risk management tools (i.e. derivatives) and portfolio diversification in order to spread risks. In this way, the depth of the financial markets and products can be improved. The fluctuations in asset prices will also be reduced along with the market depth. Lastly, the revenue structures of financial institutions, which operate in diversified markets will reflect this variety and become healthier.

In addition to fulfilling mutual financial needs, giving the opportunity of risk management and reducing systematic risk, diversification also plays an important role in international competition. The countries in which financial products are more diversified and risks are easily managed draw the attention of international investors.

As a result of the macroeconomic development, the financial markets in Turkey have developed rapidly in recent years. As long as the public debt requirement reduces, the crowding-out effect in the markets decreases. Thereby, in recent years, investors have demanded alternative investments rather than traditional investment tools in Turkey. The derivative contracts, ETFs, pension funds, OTC options, mortgage, capital protected/guaranteed funds and hedge funds are the most recent examples of product innovation and investment diversification in Turkey.

However, the primary capital market asset classes in Turkey are still deposits, government bonds, T-Bills and equities. Traditionally, Turkish investors construct their investment strategies mainly among fixed-income securities, repo, deposits, equities, investment funds, f/x linked investments and gold.

According to data obtained from TSPAKB's (The Association of Capital Market Intermediary Institutions of Turkey) 'Capital Market Factsheet' (2008), YTL deposits historically have the biggest share in residents' investment breakdown in Turkey. Thanks to appreciation of YTL against other currencies as a result of macroeconomic developments in recent years, this ratio increased from 41% in 2005 to 44% as of 2007/09. FX deposits also has a 25% share as of 2007/09, corresponding to a total 69% deposits share. In recent years, the share of FX deposits has varied around 25%. The other common investment instruments are Bonds & T-Bills, common stocks and mutual funds with 12%, 7% and 6% shares, respectively as of 2007/09. (Table 4.1)

mn YTL	2005	Share	2006	Share	2007/09	Share
YTL Deposits	141,716	41%	168,943	42%	192,170	44%
FX Deposits	82,128	24%	108,754	27%	109,277	25%
Precious Metal Deposits	96	0%	250	0%	139	0%
Participation Bank Funds	8,369	2%	10,788	3%	13,130	3%
Bonds/Bills	55,276	16%	55,781	14%	54,099	12%
Eurobonds	5,348	2%	5,413	1%	4,597	1%
Mutual Funds	29,374	8%	22,012	5%	24,925	6%
Repo	1,486	0%	2,202	1%	2,148	0%
Pension Funds	1,219	0%	2,821	1%	4,117	1%
Common Stocks	23,020	7%	26,256	7%	31,093	7%
Total	**348,032**	**100%**	**403,220**	**100%**	**435,695**	**100%**

Source: Capital Market Factsheet, TSPAKB website

Table 4.1: Residents' Investment Breakdown in Turkey

On the other hand, non-residents prefer common stocks rather than Bonds & T-Bills, Eurobonds and deposits. (Table 4.2) As of 2007/09, common stocks have 64% share in non-residents’ investments, whereas Bonds & T-Bills and deposits have 31% and 5% shares, respectively. The increase in the share of common stocks from 55% in 2006 to 64% in 2007/09 can be leaned on rally in the stock market throughout the first nine months of 2007.

mn YTL	2005	Share	2006	Share	2007/09	Share
Common Stocks	44,894	61%	50,218	55%	78,251	64%
Bonds/Bills	23,502	32%	35,086	38%	37,516	31%
Eurobonds	850	1%	794	1%	488	0%
Deposits	4,604	6%	5,992	7%	5,897	5%
Total	**73,850**	**100%**	**92,091**	**100%**	**122,152**	**100%**

Source: Capital Market Factsheet, TSPAKB website

Table 4.2: Non-Residents' Investment Breakdown

In terms of institutional investments, fixed income mutual funds constitute almost ¾ of total investments. (Table 4.3) As of 11/04/2008, fixed income mutual funds have 74% share in total institutional investments. It is followed by pension funds and REITs (Real Estate Investment Trusts), each has 14% and 8% shares, respectively.

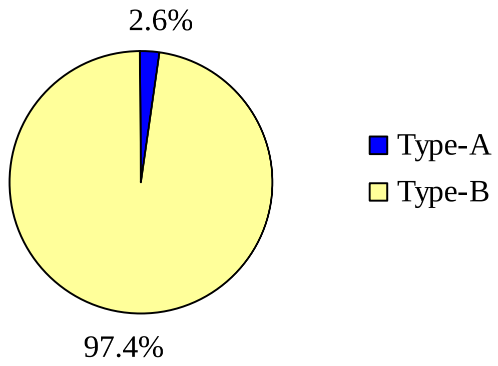
mn $	2006	Share	2007	Share	04/11/2008	Share
Equity Mutual Funds	599	3%	762	3%	519	2%
Fixed Income Mutual Funds	15,701	77%	21,670	73%	20,788	74%
Pension Funds	2,048	10%	3,813	13%	3,806	14%
Exchange Traded Funds	88	0%	226	1%	166	1%
Investment Trusts	280	1%	317	1%	334	1%
Real Estate Investment Trusts	1,487	7%	2,723	9%	2,288	8%
Venture Capital Companies	68	0%	63	0%	57	0%
Total	**20,271**	**100%**	**29,574**	**100%**	**27,958**	**100%**
Institutional Investors/GNP	5.0%		5.8%		5.8%	

Source: Capital Market Factsheet, TSPAKB website

Table 4.3: Institutional Investments

When investigated on the basis of mutual funds, the total net asset value increased by 3.5% MoM in March 2008 and reached YTL 26.9bn, according to TKYD (Turkish Institutional Investment Managers' Association). ('TKYD' 2008) The net asset value of Type-A mutual funds was YTL 0.71bn in March

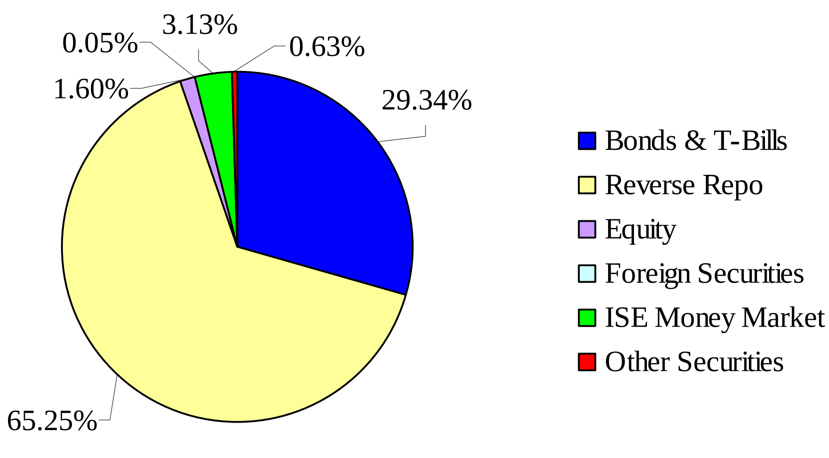
2008 (vs. YTL 0.76bn in Feb 2008), whereas the net asset value of Type-B mutual funds was realized at YTL 26.2bn in March 2008 (vs. YTL 25.2bn in Feb 2008).



Source: TKYD March 2008 Bulletin, TKYD website

Figure 4.1: Mutual Funds in Turkey (as of March 2008)

The shares of securities within the mutual funds in March 2008 is as shown below (Figure 4.2):



Source: TKYD March 2008 Bulletin, TKYD website

Figure 4.2: The shares of securities within mutual funds (as of March 2008)

At all, figures present that Turkish investors have a risk-averse investment profile. That is, they prefer riskless assets such as fixed-income securities and money market funds instead of more risky equities and equity-linked products. On the other hand, non-residents are more risk-taking than residents since equities constitute 60% of their investments on average. On the basis of mutual funds, Turkish investors again prefer to invest in less risky Type-B mutual funds.

Throughout the whole study, Turkish investors are regarded as risk averse based on abovementioned figures without analyzing their attitudes toward risk theoretically.

5. WHAT ARE STRUCTURED PRODUCTS AND CAPITAL PROTECTION FUNDS?

In this part, a first degree of knowledge about structured products / capital protected funds will be offered. Since they are the most standard and basic ones, the focus point will be only the passively managed structured products - static products- where a buy and hold strategy for the investments is used. Dynamically managed products such as CPPI are not included.

This part contains a series of investment processes that are used to create and manage capital protected products, but is by no means a limitation of the possibilities available in the investment universe. First of all, a series of possibilities that are generally used to provide a form of capital protection will be discussed and the distinction is made with capital guarantee. Linked to the different ways to protect the capital, there are various investments that can be made to obtain a defined pay-off profile. Then, these investments will be explained. Finally, an overview of primary and secondary market operations will be outlined and structured products will be briefly summarized. Throughout the whole section, the terms “structured product”, “structured fund”, “capital protected fund” or “Fix fund” will be used. Those terms are general names, which are used to determine a mutual investment fund offering a form of capital protection towards the end client. All of the terms mean the same unless otherwise specified.

5.1. A Structured Fund

As described in a FEFSI position paper of EFAMA, capital protected/guaraanted funds are structured products which offer a guarantee of income or capital or which are designed to protect investors from the market volatilities. These funds are important financial instruments for investors as they offer protection to adverse market movements while keeping them engaged in equity culture. These products also offer a unique risk & return profile that an individual investor would not be in a position to replicate cost effectively. ('The UCITS directive' 2002)

There are four distinguishable issues which need to be mentioned when explaining a structure:

1. a fixed maturity for the fund,
2. the investment made to offer a protection of the capital,
3. the remainder of the assets are invested into some form of an OTC ("over the counter" as opposed to listed) derivative and,
4. provisions that are made to cover costs and fees.

The below figure (Figure 5.1.1.) presents the general composition of a structured fund.

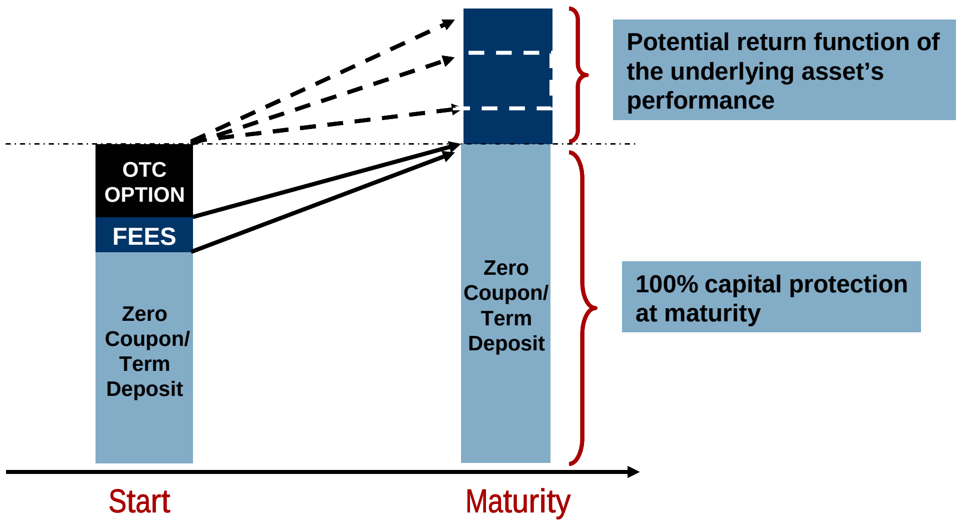


Figure 5.1.1: General composition of a structured fund.

5.1.1. Fixed Maturity

The (partial or total) protection of the initial capital is only possible at predefined (intermediary) maturity dates, since there is the need for a reference point to compare with the initial investment. With a fixed maturity and known fixed income returns, discounted values can be calculated and the appropriate investments can be determined. During the life of the product, it is possible that the valuation of the fund shows a lower value compared to the initial investment. This is due to market movements (interest rates, volatility, correlation, etc.) and influences intermediary returns.

5.1.2. Capital Protection

As mentioned above, the capital protection is only valid at maturity of the product or at predefined intermediary dates. The appropriate fixed income type investments need to be done and accruals can be calculated to safeguard the amount of capital that needs to be protected. This also means that a capital protection of 100% is not always necessary. Investments can be made to only protect a part of the initial capital (e.g. 90%) to leave more margin for potential upside return by investing more into the OTC derivative.

5.1.3. Return Instrument

In order to provide clients with a return on their investments, next to the protection of the capital, a part of the assets will be invested into another asset or into an OTC derivative. This can be an option, a swap or any other type of asset that is legally acceptable in structured products. This derivative is purchased in the OTC market which necessitates working together with counterparties for the fund (investment banks that take the risk of the underlying on their books). This, however, allows the fund to buy a derivative with the exact features the fund needs (underlying, tenor, denomination, price, etc.) and to align its maturity date with the bond. This derivative might be on different kinds of underlying assets like equity (index or individual stocks), fixed income (interest rates), commodities, FX, inflation, or any combination of those. Generally, these kinds of derivatives are priced using complex Monte Carlo simulation techniques, so if counterparties manage to model the behavior of the underlying asset, they should be able to price a derivative instrument on the asset. Some assets that are priceable might not be eligible assets to quote options on, due to a lack of liquidity of it, which might make it impossible to hedge for the derivative.

5.2. Capital Protection

There are different ways to create risk-free investments that offer a way to protect the capital. The most important requirements for structured products are a recurring inflow of cash resulting from this investment or some form of accrual over the lifetime of the product. Hereunder, the most commonly prevailing types will be described: (synthetic) zero coupon bonds and roll over deposits are first described as the generic cases. Equity (return) swaps and bond forward purchase or sale offer an alternative to obtain the same results. It is worth to mention the difference between capital protection and capital guarantee. Again, the different kinds of investments mentioned here are not limitative.

5.2.1. Zero Coupon Bond / Deposit

The most straight forward way of investing into a risk-free instrument will be to invest in bonds and more specifically in zero coupon bonds. Another way to synthetically create a zero coupon bond is to invest into a term deposit where the interest rates earned are zero rates. In this way, a discounted value of the capital to protect can be calculated using the zero rate and the invested amount on the term deposit will accrue automatically to the notional amount at maturity. (Figure 5.2.1.1.)

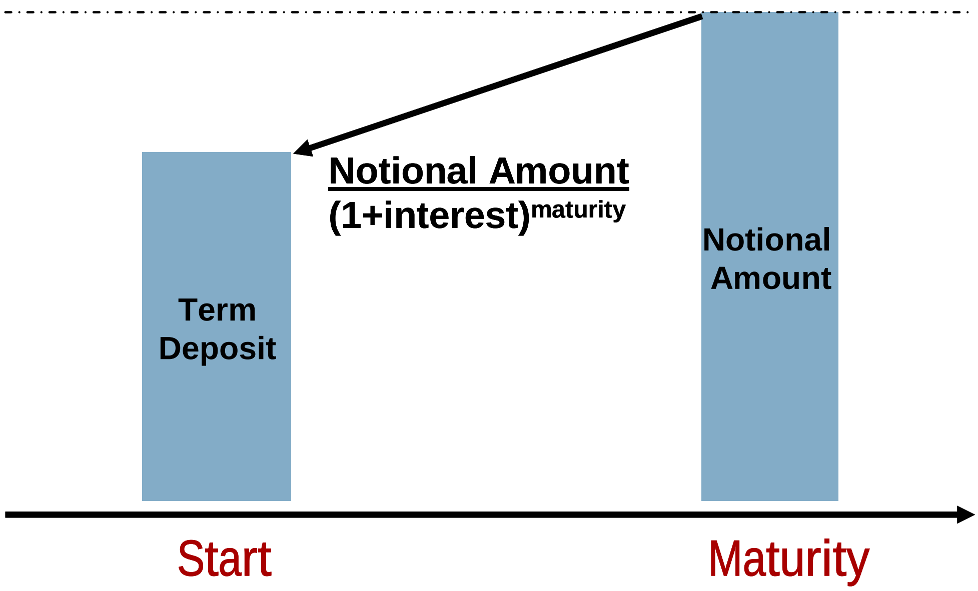


Figure 5.2.1.1: Determination of zero coupon bond / term deposit investment

While investing in a term deposit, the rest of the initial notional amount can be used to provide additional return: another (direct) investment can be done, a derivative premium can be paid, etc.

5.2.2. Bond / Roll-over Deposit

Per definition, fixed income products provide the investor with a regular “fixed income”. When buying a bond or commercial paper at par, the end value at maturity of the bond will also be par, but in the mean time, the investor receive recurrent payments of coupons. In order to create the synthetic form of a bond where maturities can be fine-tuned and flexibility is enhanced a roll-over deposit can be set up in a fund. (Figure 5.2.2.1.) The recurrent payment of interest can then be seen as the income and will generally be expressed as a floating interest rate in function of Libor (Libor or any interbank offered / agreed rate relevant for the currency in which the fund is expressed) rates.

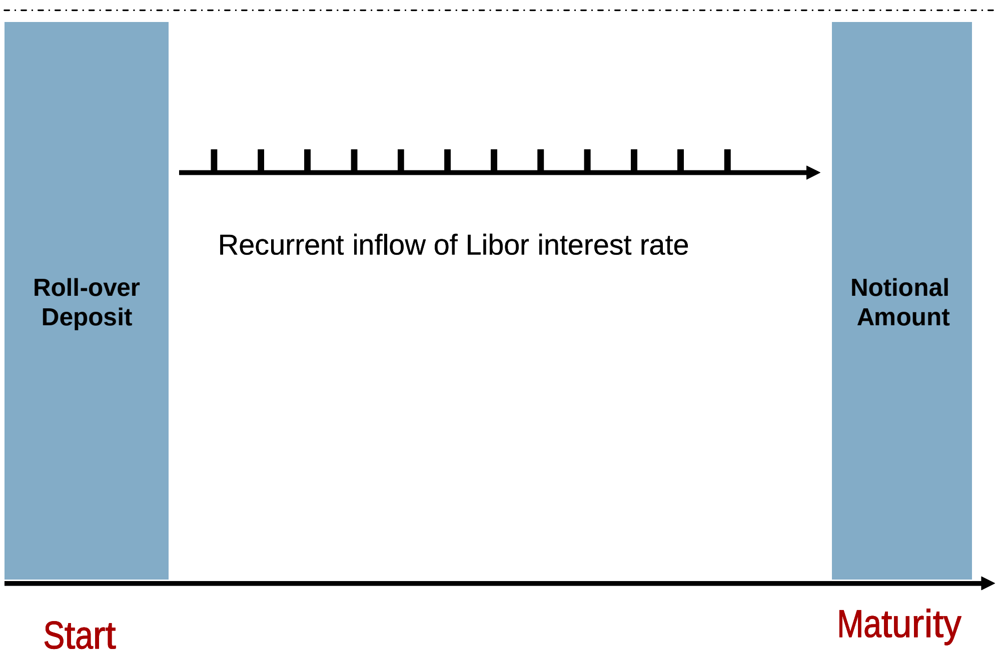


Figure 5.2.2.1: Roll-over deposit payment scheme

The recurrent inflow of interest can be used to pay for recurrent payments in a swap structure for the return instrument. This swap structure can be a floating vs. floating swap where the counterparty pays in exchange of the floating Libor rates a determined pay-off formula linked to the return of the underlying assets. It can also be a floating vs. fixed swap where the counterparty pays in return for the floating Libor rates a certain fixed amount at a specific date in time.

If, in a roll-over deposit, the notional amount is only invested for a short term (e.g. 3 months), then the 3M Libor will be the interest rate. This investment can be “rolled-over” every time when needed to cover the whole maturity of the fund. By doing so, one can provide for capital protection every 3 months and structures can be created without the need for a fixed maturity.

5.2.3. Bond forward purchase

Different legislative environments sometimes require different alternatives to the above mentioned generic structures to offer capital protection. In some cases, deposits are not allowed and government bonds are the only eligible instrument to work with. In order to synthetically make up for the same needs (up-front availability of an amount to cover option premiums and costs), a bond forward purchase can be structured. (Figure 5.2.3.1.)

With a bond forward purchase, the fund buys a certain amount [1-A] of a government bond at the start of the fund and swaps the coupons received on this amount with a counterparty. In exchange for these coupons, the counterparty agrees to provide the fund with the remaining amount A of the bond at maturity. As such, the transfer of coupons to the counterparty is the price to pay for the amount A. This allows the fund to have an up-front amount equal to A available to buy the return instrument.

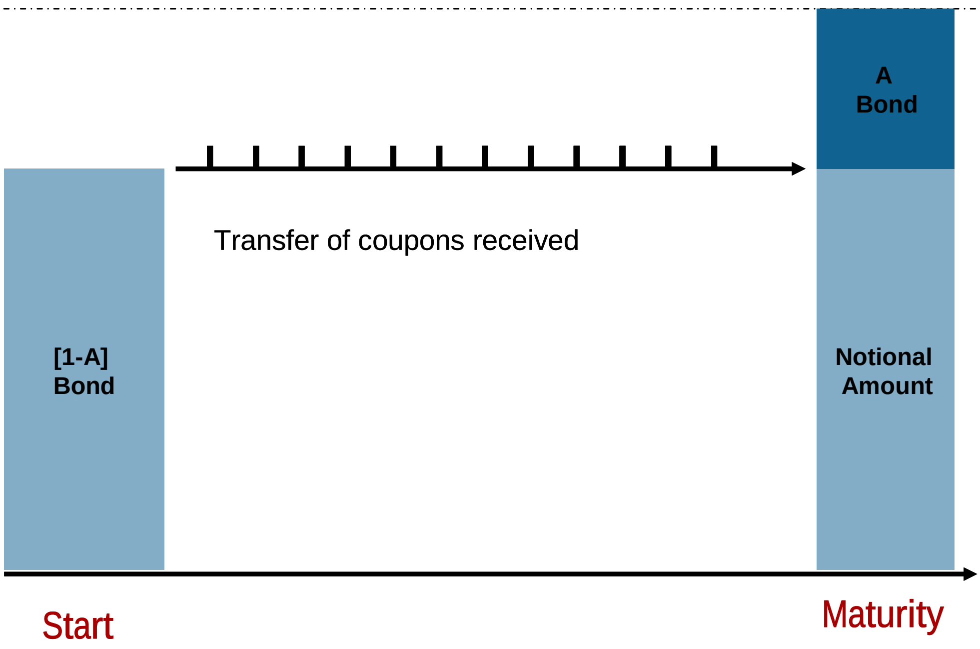


Figure 5.2.3.1: Bond forward purchase mechanism

5.2.4. Bond forward sale

A similar structure to bond forward purchase is the bond forward sale. With the forward sale of the bond, the fund buys the necessary 100% amount of government bonds and agrees to sell these bonds at par to a counterpart at maturity of the fund. (Figure 5.2.4.1)

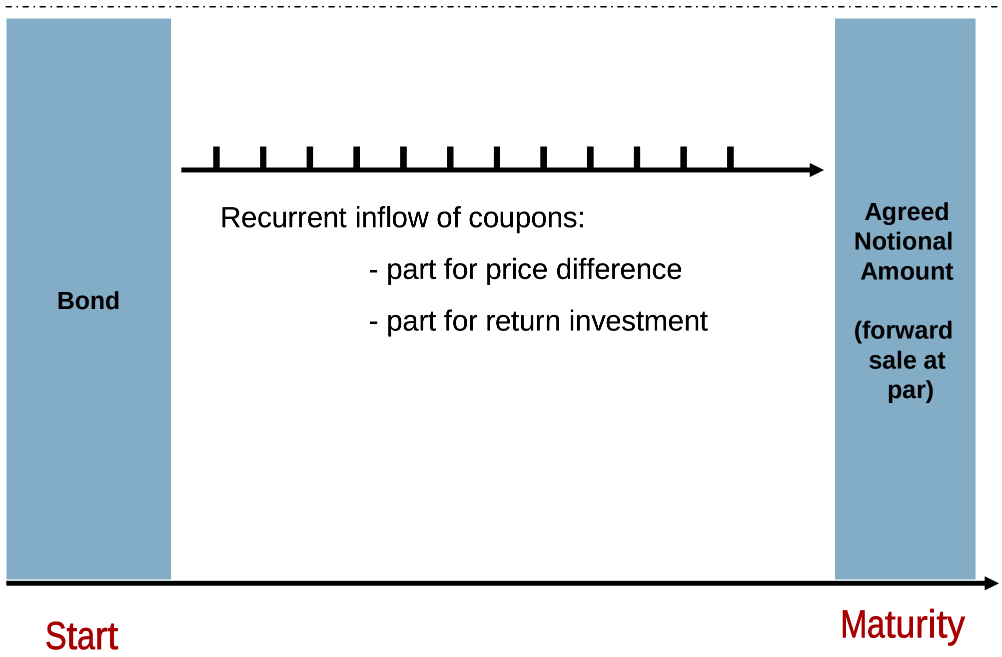


Figure 5.2.4.1: Bond forward sale mechanism

By doing so, the fund holds a bond and is sure to have 100% of the capital at the maturity. The recurrent inflow of coupons paid by the bond can be used in the same way as mentioned in the description of a roll-over deposit. Generally, government bonds trade above par at the moment, since the coupons paid are higher than the current market interest rate. So the fund will have to make up for the price difference between what the fund pays at start and receives at maturity. A part of the coupon inflow can be used for that. The remainder of the coupon inflows is then used to pay for the return instrument.

In most cases, the total amount of coupons is swapped against a recurrent inflow of Libor interest rates (with a correction of certain bps spread). With this recurrent inflow of Libor - XX bps, the fund can pay for the return instrument.

5.2.5. Equity Swap

In order to have the same cash flow scheme as with the bond forward sale or the roll-over deposit, the fund can also structure a total return swap linked to equity. (Figure 5.2.5.1) To do so, a basket of stocks is chosen, and the fund buys those stocks from a counterpart for 100% of its notional amount. During the life of the contract, the fund swaps all positive performances and dividends it receives against payment of the negative performance plus a Libor-linked interest rate.

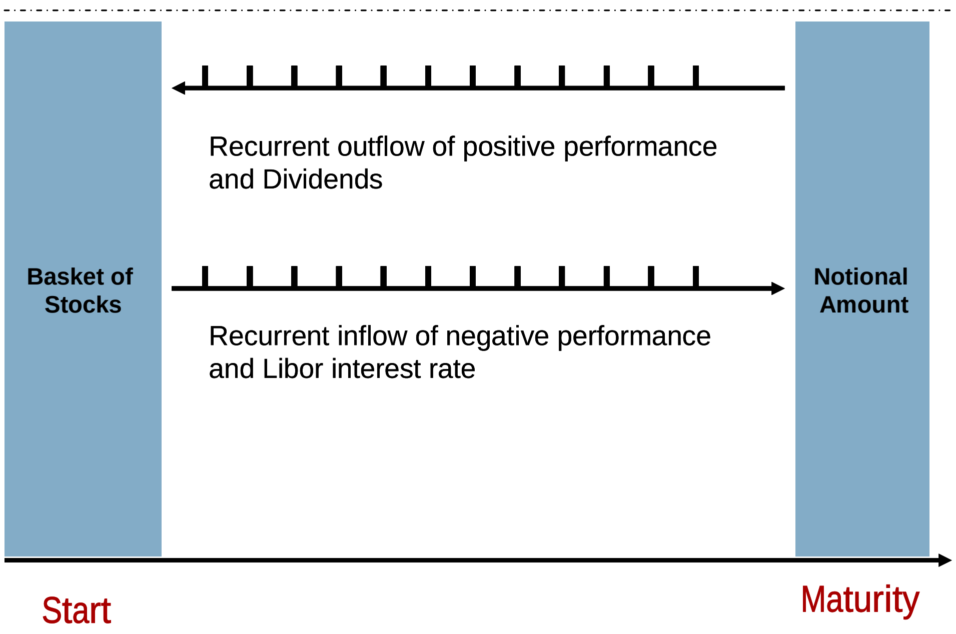


Figure 5.2.5.1: Equity swap cash flow scheme

As such, the same net result as a roll-over deposit is created. The value of the portfolio of stocks remains equal to 100 at predetermined rebalancing dates and the fund will receive a regular inflow of Libor - XX bps.

5.2.6. Capital Guarantee vs. Capital Protection

An important distinction has to be made between capital protection (what has been described above) and capital guarantee. Both terms are often confused, but they don't mean the same thing. 'The UCITS directive' (2002) recognises capital guarantee as a formal, legally binding guarantee, whereas it describes capital protection as a fiduciary duty towards the unit/shareholder:

> Capital protected funds are generally constructed around portfolio management techniques and should in principle pose minor problems as long as the fund characteristics are clearly explained to investors. In essence, capital protected funds only need clear regulation on the disclosure of the nature of both the type of safeguard and of the management technique employed.
>
> Guaranteed funds can be seen as a capital protected fund with an additional formal guarantee, in which case the nature of the guarantee and the identity of the guarantor becomes important, in particular, ensuring that they are subject to appropriate prudential requirements in relation of the guarantee. A legal guarantee is itself well regulated within each EU jurisdiction and does not seem to require any further specification. (2)

Thus, with a capital guaranteed product, there should be an external or internal guarantor where the fund buys a guarantee and the guarantor reserves a part of its balance sheet to provide for compensation of eventual losses in the fund. The price for this guarantee will be a function of operational risks (business models used to manage the fund), credit risk of counterparts, market risk (volatility of the underlying asset), the cost of capital for the guarantor, etc.

On the other hand, a capital protection is based on best-effort practice to manage the fund as explained in the product description and management principles. The above mentioned method obtains capital protection in a mathematical / economical way, but the asset manager needs to abide by the investment principles and avoid any mistake that might endanger the capital protection. Therefore, a detailed investigation of the cost structure of the fund is necessary and documentation on trading contracts needs to be thoroughly verified.

5.3. Return Instrument

Next to a protection or guarantee of the capital, fix funds offer an exposure to a risk bearing asset to offer a return for the investor. This return can be obtained by doing a direct investment in this risky asset or by entering into a derivative transaction on this underlying asset: an option or a swap contract.

5.3.1. Direct Investment

In the cases where the capital protection structure provides for an up-front available amount, this amount can be invested directly into an underlying risky asset. For example, the fund can invest the larger amount of its assets into a deposit (amount calculated by the discount rate) or into a bond forward purchase (amount linked to coupons) and the remainder of the assets can then be (after provisions for costs and fees) invested into a single stock or stock index tracker. This construction will offer a protection of the capital and at the same time an exposure to the risky asset equal to the up-front amount minus cost & fee provisions.

This is the most straightforward way to obtain exposure to an asset and at the same time offering a protection of the capital. The valuation of the risky part is equal to the market value of the investment. Because the provision for management fees and costs will evolve to 0 at maturity (all costs will have been paid for), the value of the structure at maturity will be equal to the capital protection plus the value of the direct investment.

5.3.2. OTC option

In order to increase the participation on the underlying asset, an option can be bought with the up-front available amount. The advantage of using OTC derivatives is that a fund can build very exotic structures by only having an exposure to one option. A fund can also try to replicate the payoff of an OTC derivative by investing into a combination of listed options, but this is less liquid and a mismatch of maturities will be hard to prevent. Since the fund will not have a direct investment into the relevant asset in this case, dividend payments flowing from the asset will not go to the fund or the investor, but to the counterpart managing the risk by taking positions into the underlying asset.

As such, dividends will result into an additional cash inflow for the counterpart, thus cheapening the option premium for the fund.

The fund invests the larger amount of its assets into a deposit (amount calculated by the discount rate) or into a bond forward purchase (amount linked to coupons) and the remainder of the assets can then be (after provisions for costs and fees) invested into a tailor-made option, with a predetermined payout linked to the performance of the underlying asset. As such, very exotic structures can be created. The valuation of the risky part will be a function of the evolution of the underlying, the evolution of the volatility of the underlying, the time to maturity, the evolution of interest rates, dividends expected during the remaining lifetime of the structure. Because the provision for management fees and costs will evolve to 0 at maturity, the value of the structure at maturity will be equal to the capital protection plus the value of the option part.

5.3.3. Swap

In the cases as explained for Roll-over Deposit, Bond Forward Sale and Equity swap, where there is no up-front amount available, the premium of the option can not be paid at once. The same pay-off exposure can then be bought using a swap structure.

The recurrent inflow of Libor linked interest rate (expressed as a spread against Libor or Libor - XXbps) can be used to make installment payments for the option premium expressed as Libor - YYbps (where YY > XX). This boils down to a swap where the fund pays a recurrent interest rate linked payment on the notional amount to the counterpart in exchange for the predefined payoff linked to the underlying asset.

At start, the value of the swap is equal to 0. The valuation of the capital protection part will be equal to 100 at every rebalancing date (market standard 3 months or 6 months, interest rate payments linked to Libor 3M or Libor 6M). The valuation of the swap will be in function of the interest rate linked payments already made and the evolution of the underlying (a function of the evolution of the underlying, the evolution of the volatility of the underlying, the time to maturity, the evolution of interest rates, dividends expected during the remaining lifetime of the structure). The difference between Libor - XXbps (what the fund receives) and Libor - YYbps (what the fund pays) will be used to cover fees and costs.

In order to create a fund offering the client at the same time a protection of the initially invested amount and a return linked to an underlying asset, combinations of the above mentioned structures can also be made.

5.4. Primary & Secondary Markets

The primary market for a fix fund is the period that contains the whole set-up of the fund until the moment where the initial NAV (Net Asset Value) is calculated and the fund starts to exist. In a broad sense, this period contains the proposal of new products, the decision taking process, the creation and introduction of the prospectus, the creation and distribution of the termsheet, the initial hedge, the subscription period and subsequent hedges until the final hedge and the margin calculation.

The lifetime of the structure between the first NAV date and the maturity of the fund is the secondary market period. During this period, the fund manager will be managing intermediary subscriptions and redemptions and perform rebalancing operations on every NAV calculation date. The secondary market period can be divided into equal NAV periods with each time a relevant payment date, with or without intermediary coupon payments, until the calculation of the last NAV date.

5.5. Counterparts

When investing into OTC derivatives and OTC bonds (deposits), the fund will have some counterparts which are investment banks offering the OTC derivative to deal with. Interrelationships between the fund and the provider of the OTC derivative are globally ruled by an ISDA® Master Agreement Protocol. The ISDA (International Swaps and Derivatives Association) master agreement is a necessity for parties entering into derivatives operations. All bilateral responsibilities and duties are arranged in this master agreement.

As an annex to the ISDA Master Agreement, a CSA (Credit Support Annex) sets out the rules and flows for collateral arrangements. Since both parties in the ISDA contract will be dealing with swaps and derivatives for big amounts, collateralization is a necessity to cover credit risk.

On top of all international agreed standards, internal risk management procedures and local regulation may set additional rating requirements for the counterparts dealing in derivatives transactions. A minimum rating of A+ or AA- is often the standard for working with investment banks.

Long form contracts can also be used instead of working with ISDA contract. Long form contracts are established generally on a fund by fund basis, whereas ISDA Master Agreements are easily used for recurrent transactions.

5.6. Structured Funds in Brief

According to 'The UCITS directive' (2002), while structured products are offering considerable benefits to investors, they also involve such issues that investors must understand:

The investor must understand what he/she is buying and be placed in a position to judge for him/herself on the product's suitability.

The investor must clearly understand what the nature of the secured fund consists of, i.e. capital protection or legal guarantee, and in the latter case by whom and to whom this commitment is extended. (4)

In short, structured funds or capital protected funds offer a combination of two investments. The first investment needs to be done in order to preserve the capital at maturity or at any intermediary call date. The second investment needs to be done in order to create an additional payoff probability for the investor (return instrument).

When the capital only needs to be preserved at final maturity, a zero coupon bond type investment can be used in combination with an option. Roll-over deposits and swaps are also possible in this case. The choice whether the capital protection instrument is a deposit, bond, bond forward contract or equity swap depends on local regulation, tax issues and investor preferences.

When the capital does not only need to be protected at final maturity, but also on possible intermediary call dates, in other words, if the exact maturity date is not known, investments need to be done appropriately. The capital protection instrument needs to have more or less the same profile as a roll-over deposit. This results into a recurrent interest inflow, so the return instrument is generally bought in a swap format. Also here, how the investments are done exactly (roll-over deposit, bond, equity swap, etc.) depends on local regulation, tax issues and investor preferences.

6. EMPIRICAL RESULTS

In this section, the main question which is “Do Structured Products have an impact on Turkish investors’ risk & return profile?” will be tried to be answered by showing and discussing the empirical results of the study. To do so, first of all, the methodology of the work should be explained in detail. Then, empirical results for both a 2 year and a 4.5 year time horizon will be presented. At the end, the main conclusion of the study and other supplementary concluding remarks will be shared.

6.1. Methodology of the study

Data Gathering: In the light of results presented in Section 4, Turkish investors’ investment world can be divided into two major parts: Equity and Bond (fixed income) investments. Accordingly, for equity and bond respectively, the daily index values of ISE 30 and daily 1 year TRLibor (TRLIB1Y) interest rates (from 01/08/2002 to 31/12/2007) were downloaded from Bloomberg®.

Construction of Historical Time Series: Based on gathered data, the historical time series for equity, bond and a plain vanilla Structured Product (SP) were constructed. For equity, equity indices were calculated based on both 2 year (starting index value of 100 on 02/01/2006) and 4.5 year (starting index value of 100 on 01/08/2003) time horizon. For bonds, indices were constructed for both time horizons via an index investing daily against the 1 year TRLibor

(TRLIB1Y) interest rates. The formulas for calculating equity and bond indices are as below:

for Equity: $I_1 = I_0 \times \left[1 + \left(P_1/P_0 - 1\right)\right]$ where;

I_0 is starting equity index value (100) at t_0,

I_1 is next day's (t_1) equity index value,

P_1 is the value of ISE 30 index at t_1,

and P_0 is the the value of ISE 30 index at t_0.

for Bonds: $I_1 = I_0 \times \left(1 + i_0\right)^{(n/365)}$ where;

I_0 is starting bond index value (100) at t_0,

I_1 is next day's (t_1) bond index value,

i_0 is the daily 1 year TRLibor interest rate at t_0

and n is the number of days between t_0 and t_1 (one working day).

Remark: As explained earlier, 1 year TRLibor interest rate is used to construct the historical bond investments time series. The name bonds is used to refer to a synthetically created time series which involves investing for 1 day against the TRLibor interest rate. In this way, an index is created reflecting fixed income investments and is therefore called 'bond investments'.

For SP, the most standard (plain vanilla) Structured Product, with a maturity of one year, involves investments in a zero coupon bond (deposit yielding 1 year

Libor) and a European at-the-money (ATM) call option on ISE 30 index. Because of the lack of historical data for existing Structured Products in Turkey, a series of hypothetic products was first created and then used for return and risk analysis (backtesting). In other words, an assumption was made as to how financial markets would have looked like if structured products existed in previous years. At first, daily returns on ISE 30 index and volatilities of these returns were calculated, starting from one year before the construction of the first SP. Based on the observed volatilities, a call option price for every daily SP was calculated by using Black-Scholes Pricing Formula (Hull 2003):

$$c = S_0 N(d_1) - Ke^{-rT} N(d_2)$$

$$d_1 = \frac{\ln(S_0/K) + (r + \sigma^2/2)T}{\sigma\sqrt{T}}$$

$d_2 = d_1 - \sigma\sqrt{T}$ where;

The function $N_{(X)}$ is the cumulative probability distribution function for a standardized normal distribution. In other words, it is the probability that a variable with a standard normal distribution, $\phi(0,1)$ will be less than x. The variable c is the European call price, S_0 is the stock price at time zero, K is the strike price, r is the continously compounded risk-free rate, σ is the stock price volatility, and T is the time to maturity of the option. (246)

Then, each daily call price was translated into percentage terms by dividing them with the corresponding strike price in order to construct an SP.

The next step was the creation of hypothetical SPs for both time horizons. In this step, the weights of zero coupon bond and option in each SP were calculated by taking capital protection into consideration. Therefore, first, the weights of zero coupon bonds in each SP was calculated via the formula below:

$W_{ZC} = 1/1 + r$ where;

W_{ZC} is the required weight of zero coupon bond to protect capital,

r is the 1 year interest rate on that day.

Then, the remaining portion was allocated to a call option. Since the price of the call option was every time higher than what was available to buy an option, only a part of the option could be bought. Buying only a part of an option results in "participating" in the upside of the underlying for less than 100%. The participation rates for each SP to equity were calculated, by taking the ratio of the option's weight in SP to the call price (in % terms), since the price of a call option was always higher than the weight of the option in each SP. At the end, several different SPs each of which involve a one year zero coupon bond and a one year call option were obtained for every day in both time horizons. Every single SP had a different participation ratio to equity for a 1 year maturity.

Backtesting on Historical Time Series: Following the construction of historical times series, backtesting on these series were applied for a 2 year and a 4.5 year history. In this part, the aim was to calculate returns and volatilities for equity (ISE 30), bonds (TRLibor index) and SP. First of all, for each day, daily and yearly returns on equity and bond indices were calculated. Then, annual volatilities for these instruments were calculated based on these daily returns. For structured products, the yearly return for each product (after a one year investment period) was calculated by the formula as shown below:

$R_{SP} = Max(0; Ax(P_1/P_0))$ where;

R_{SP} is the return on a one year SP on the maturity date (t_1 - one year later),

A is the participation rate of that SP to call option at the launch date (t_0),

P_0 is the the value of ISE 30 at the launch date (t_0) of SP (P_0 = K)

P_1 is the value of ISE 30 on the maturity date (t_1) of SP.

However, for the calculation of SP volatility, these returns could not be used because they were the returns of different SPs. To overcome this matter, SPs were considered as portfolios, consisting of zero coupon bonds and options, and daily portfolio volatilities were calculated according to below formula, which was stated by Alexander, Sharpe and Bailey (2001):

$$\sigma_p = \left[\sum_{i=1}^{N} \sum_{j=1}^{N} x_i x_j \sigma_{ij} \right]^{1/2} \text{ where;}$$

σ_p is the standard deviation (volatility) of the portfolio,

x is the weight of a security,

N is the number of securities,

σ_{ij} is the covariance of the returns between security i and and security j

$\sigma_{ij} = \rho_{ij}\sigma_i\sigma_j$ where;

ρ_{ij} denotes the correlation coefficient between the return on security i and the return on security j. (132-134)

The weight and volatility of bond investments are easily known for all simulated SP. They are the amount of the SP that invests into the zero coupon bond and the volatility as calculated for bonds. The second asset in which SPs invest are options. To calculate the volatility of options, the delta of the option was calculated and multiplied with the equity volatility. The delta of a call option reflects the rate of change of the option price with respect to the price of the underlying asset. Hull (2003) stated:

$$\Delta = \frac{\partial c}{\partial S}$$

where c is the price of the call option and S is the stock price. (302)

According to Hull (2003), the delta for a European call option on a non-dividend paying stock is equal to $N(d_1)$:

$$\Delta = N(d_1)$$

In the calculation of the option prices, d_1 and d_2 were discussed. These could be recovered for this calculation.

By multiplying the volatility of equity with the delta, the volatility of the option could be obtained to implement into the formula for portfolio volatility calculation. (see page 55).

Determination of Feasible, Efficient Sets and calculation of Sharpe Ratios:

Based on calculated annual returns and annualized volatilities, different sets of portfolios were constructed containing one, two or three assets with different weights, each displaying its own risk & return combinations. By applying different weights to equity, bonds and SP, efficient frontiers were plotted. Additionally, for each of the portfolios, a Sharpe Ratio, that is a measure of the risk premium (or excess return) per unit of risk in an asset or a trading strategy (Sharpe 1994), was calculated according to the below formula:

$$S = \frac{E\lfloor R - R_f \rfloor}{\sigma} = \frac{E\lfloor R - R_f \rfloor}{\sqrt{\mathrm{var}\lfloor R - R_f \rfloor}}$$ where;

R is the return of asset,

R_f is the return on a benchmark asset, such as risk-free rate,

$E\lfloor R - R_f \rfloor$ is the expected value of the excess return of the asset over benchmark return and,

σ is the standard deviation of the excess return.

This ratio was first invented by also Sharpe (1966) and he originally called it as "reward-to-variability" ratio. The portfolio with the highest Sharpe ratio indicates the optimal portfolio for investors, as it gives the portfolio with the highest return for a given amount of risk. That is, investors are advised to choose invetments with higher Sharpe ratios. These calculations and observations were done both on the results of the 2 year and the 4.5 year observation periods.

6.2. Results

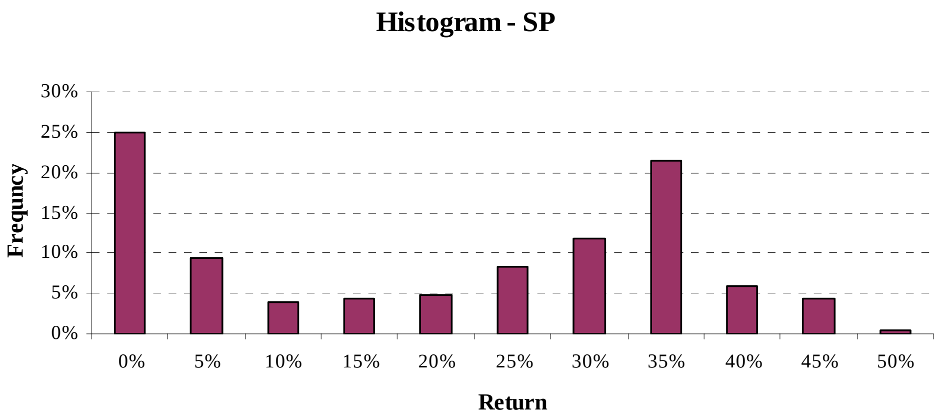
The results of abovementioned calculations are discussed below. First on the 2 year observation period. Later, the 4.5 year observation period will be discussed.

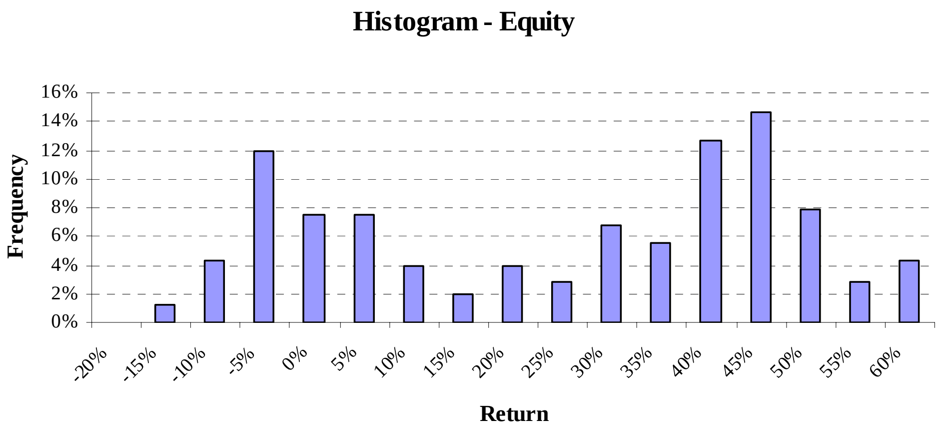
6.2.1. Two-Year Observation Period

For a two year time horizon, first, return distributions were plotted both separately and as a summary of the three asset classes. As shown below (Table 6.2.1.1), maximum, minimum and average returns of the three assets were calculated.

Return Distribution	Equity	Bonds	SP
Max. Return	59.2%	19.9%	45.3%
Min. Return	-17.0%	17.7%	0.0%
Avg. Return	22.7%	19.0%	18.5%

Table 6.2.1.1: Two year return distribution summary for three asset classes





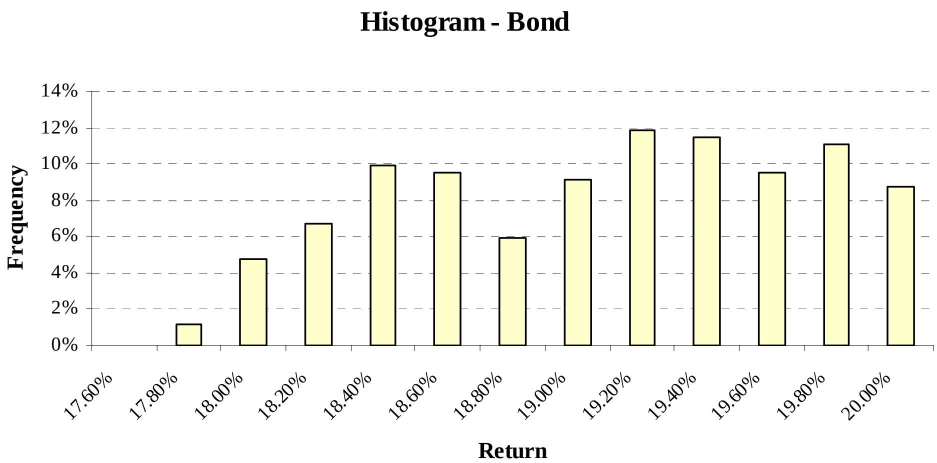


Figure 6.2.1.1: Histograms for SP, equity and bonds (for two year period)

Accordingly, the most important observation is that SP does not allow losses on investments since it protects capital. On a two-year observation period, for SP, the frequency of zero returns (Figure 6.2.1.1) is a significant amount since the equity market in this period is in a downside pattern.

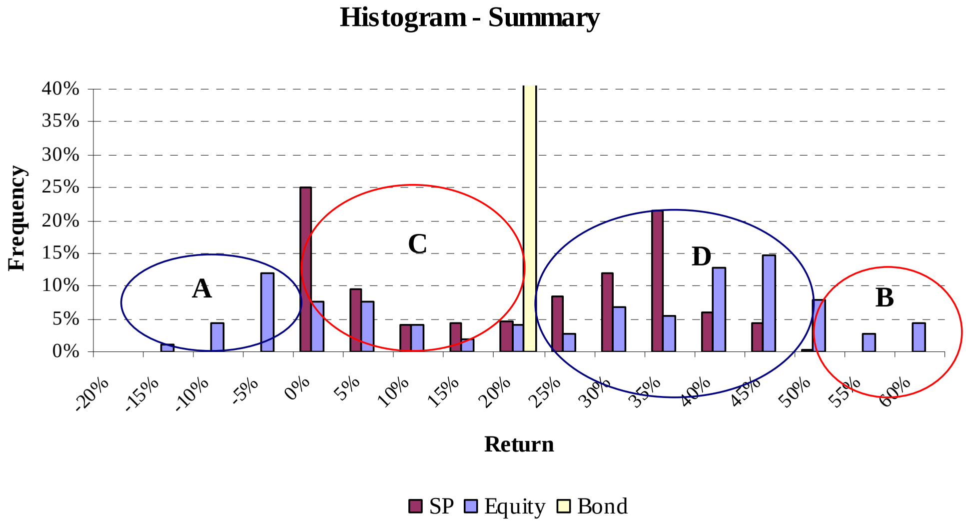


Figure 6.2.1.2: Histogram summary for three asset classes (for two year period)

In Figure 6.2.1.2, area A indicates that SP outperform equity in bear markets since it protects capital and limits the return at zero. On the other hand, area B indicates that SP underperform equity in bull markets because it participates only for some portion in equity returns (on average 73.69%, see Appendix A). Compared to bonds, the result is again mixed. Whereas bonds are fixed income securities, SP enables its investors to invest in equity and get the opportunity of gaining higher returns, as well as underperformance of equity to bond investments to some extent. Hence, area C indicates that SP underperform bonds in relatively bear markets whereas area D indicates that SP outperform bonds in relatively bull markets.

In terms of volatility features of these assets, equity has the highest and bonds has the lowest volatility, as expected. (Table 6.2.1.2) For SP, it is observed that SP's volatility is closer to bond volatility since zero coupon bonds have significantly higher weight than call option in the structure of the product. The zero coupon bonds have 84.62% weight in a SP on average. (see Appendix A) From the risk point of view, the second important finding for SP is that SPs exclude downside volatility. That is to say, there is no downside risk in a SP since it protects capital.

Volatilities	**Equity**	**Bonds**	**SP**
Max. Std. Dev.	30.8%	0.8%	4.6%
Min. Std. Dev.	24.5%	0.6%	2.8%
Avg. Std. Dev.	28.9%	0.7%	3.5%

Table 6.2.1.2: Volatilities for three asset classes in two year observation period

Following the calculation of average returns and volatilities for each asset class, it is now possible to determine feasible and efficient sets, as wells as Sharpe ratios of different synthetic portfolios in the light of information below (Table 6.2.1.3):

Risk-Return Matrix	E(r)	σ
Equity	22.7%	28.9%
Bonds	19.0%	0.7%
SP	18.5%	3.5%

Table 6.2.1.3: Average Risk-Return Matrix for two year observation period

Graphically this can be shown as follows:

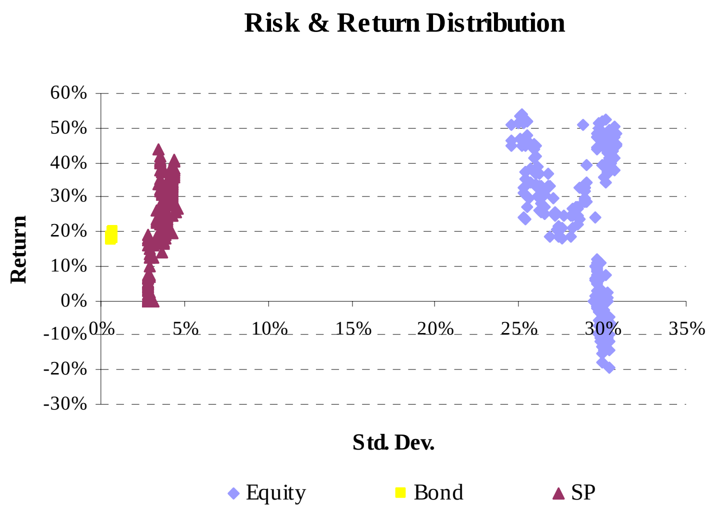


Figure 6.2.1.3: Risk & Return distribution for two year observation period

As it is shown in Figure 6.2.1.3, bonds are on the left side offering 19% return on average, with a low standard deviation of 0.7%. SP is less risky compared to equity but more dispersion in return and limit for negative returns. While offering higher returns, equities seem too risky for investors.

<u>Feasible and Efficient Sets & Sharpe Ratios:</u> Investors evaluate alternative portfolios considering their expected returns and standard deviations. Several,

even infinite number of portfolios, can be constructed from a combination of N securities. That is, investors can purchase an infinite number of possible portfolios. However, they do not need to evaluate all these portfolios. Alexander, Sharpe and Bailey (2001) emphasized that:

> The key to why the investor needs to look at only a subset of the available portfolios lies in the efficient set theorem, which states that
>
> An investor will choose his or her optimal portfolio from the set of portflios that
>
> 1. Offers maximum expected return for varying levels of risk, and
> 2. Offers minimum risk for varying levels of expected return.
>
> The set of portfolios meeting these two conditions is known as the efficient set (also known as the efficient frontier) (147)

The efficient set can be identified from the feasible set which represents all portfolios that can be constructed from a group of N securities. All possible portfolios lie either on or within the boundary of feasible set. In order to meet above mentioned two conditions of efficient set theorem, portfolios which lie on the northwest boundary of feasible sets form the efficient set. All the other portfolios within the feasible set are inefficient portfolios and can be ignored.

In this study, some synthetic portfolios are constructed by using expected returns and standard deviations of equity, bonds and SP for a two year observation period. To do so, first, correlation matrix for these assets is formed. (Table 6.2.1.4)

Correlation Matrix	**Equity**	**Bond**	**SP**
Equity	1		
Bond	0.4%	1	
SP	98.2%	-7.8%	1

Table 6.2.1.4: Correlation Matrix for two year observation period

The synthetic portfolios which are constructed on the basis of above mentioned correlations and previously calculated average returns and standard deviations are as shown in Table 6.2.1.5.

Before analyzing feasible and efficient sets, the sharpe ratios of these portfolios indicate that the portfolio with the highest Sharpe ratio, i.e. the portfolio offering the highest amount of return for a given amount of risk, is the portfolio contaning 100% bonds. (Sharpe Ratio of 2.794) To calculate the Sharpe Ratio, risk free interest rate of 17% was chosen since this is close to risk free interest rates in Turkey at the time this study was written. Actually, a series of risk free interest rates was used ranging between 5% and 18.5%. Observation showed that for any given risk free interest rate the same portfolio seemed to be optimal.

	E(r)	σ				E(r)	σ				E(r)	σ		
Equity	22.7%	28.9%			**Bond**	19.0%	0.7%			**Equity**	22.7%	28.9%		
Bond	19.0%	0.7%			**SP**	18.5%	3.5%			**SP**	18.5%	3.5%		
Corr:	0.4%				**Corr:**	-7.8%				**Corr:**	98.2%			
R(f):	17%				**R(f):**	17%				**R(f):**	17%			
#	**W(e)***	**E(r)**	σ	**SR****	**#**	**W(b)***	**E(r)**	σ	**SR****	**#**	**W(e)***	**E(r)**	σ	**SR****
P1	0%	19.0%	0.7%	2.794	P1	0%	18.5%	3.5%	0.434	P1	0%	18.5%	3.5%	0.434
P2	10%	19.3%	3.0%	0.791	P2	10%	18.6%	3.2%	0.497	P2	10%	18.9%	6.0%	0.322
P3	20%	19.7%	5.8%	0.467	P3	20%	18.6%	2.8%	0.575	P3	20%	19.4%	8.6%	0.275
P4	30%	20.1%	8.7%	0.355	P4	30%	18.7%	2.5%	0.675	P4	30%	19.8%	11.1%	0.250
P5	40%	20.5%	11.6%	0.298	P5	40%	18.7%	2.1%	0.808	P5	40%	20.2%	13.7%	0.233
P6	50%	20.8%	14.5%	0.264	P6	50%	18.8%	1.8%	0.989	P6	50%	20.6%	16.2%	0.222
P7	60%	21.2%	17.4%	0.242	P7	60%	18.8%	1.4%	1.246	P7	60%	21.0%	18.8%	0.214
P8	70%	21.6%	20.3%	0.225	P8	70%	18.8%	1.1%	1.625	P8	70%	21.4%	21.3%	0.208
P9	80%	21.9%	23.2%	0.213	P9	80%	18.9%	0.9%	2.169	P9	80%	21.8%	23.8%	0.203
P10	90%	22.3%	26.0%	0.204	P10	90%	18.9%	0.7%	2.745	P10	90%	22.3%	26.4%	0.199
P11	100%	22.7%	28.9%	0.196	P11	100%	19.0%	0.7%	2.794	P11	100%	22.7%	28.9%	0.196

** W(e) refers to the weight of equity, W(b) refers to the weight of bond.*

*** Sharpe Ratio*

Table 6.2.1.5: Synthetic portfolios for two year observation period

The Graph below (Figure 6.2.1.4) shows the combination of feasible sets for the three asset classes. The northwest line indicates all combinatons between bonds and equity, and is therefore the efficient frontier. Point A indicates the efficient portfolio with the highest Sharpe Ratio. It shows in the graph that portfolios containing SP are inefficient and should therefore theoretically not be taken into consideration.

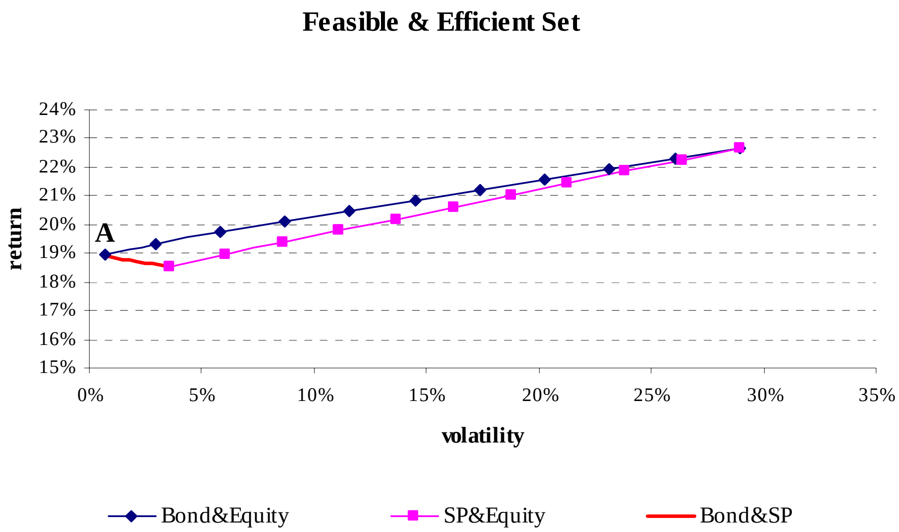


Figure 6.2.1.4: Feasible and Efficient sets for two year observation period

There are, however, some reasonable explanations why these portfolios seem inefficient:

1. The short observation period does not allow for a large number of observations.
2. The high frequency of zero returns (Figure 6.2.1.1) distorts the average return of SP. (25% of all observations yield a return of 0)

This shows the importance of timing when launching a structured product (offering a participation rate of 74% to an asset yielding zero return will also result in zero return).

A way to overcome the problem of short observation period and timing is to look at a longer time horizon, e.g. 4.5 years.

Extending the time horizon for observations doesn't influence the composition of different SPs. As seen in the table below (Table 6.2.1.6), although interest rates are on average higher for a longer maturity, the participation rate that can be obtained in the call option doesn't change a lot. This is mostly due to the higher average volatility of equity over the longer period. A higher interest rate should "ceteris paribus" result in a higher participation rate, since there is more available to invest in an option (zero coupon bond weight lower). However, the higher volatility increases the option price. In short, there is more available to invest in an asset that is more expensive. These two parameters offset each other.

Period	Avg. Weights		Avg. Option Price	Avg. Participation Rate	Avg. Yearly Equity σ
	ZC Bond	Option			
2 years	84.6%	15.4%	20.8%	73.7%	28.8%
4.5 years	82.7%	17.3%	23.3%	74.2%	31.8%

Table 6.2.1.6: Comparison of SP characteristics for different time horizons

6.2.2. Four and a Half Year Observation Period

For a 4.5 year time horizon, again return distributions are plotted both separately and as a summary of the three asset classes. As shown below (Table 6.2.2.1), maximum, minimum and average returns of the three assets were calculated.

Return Distribution	Equity	Bonds	SP
Max. Return	94.0%	29.5%	74.9%
Min. Return	-19.2%	15.2%	0.0%
Avg. Return	37.1%	19.4%	28.4%

Table 6.2.2.1: 4.5 year return distribution summary for three asset classes

Again, SP does not allow for losses on investments since it protects capital, so the minimum return is by definition zero. The frequency of zero returns for SP (Figure 6.2.2.1) is significantly lower than on the two year observation period. This clearly shows that periods of consecutive bear markets have less weight on the results. Furthermore, the return distribution of equities shows a more normal distribution pattern compared to two year time frame. Excluding the zero return, observation in the SP histogram indicates that also SP returns are rather normally distributed.

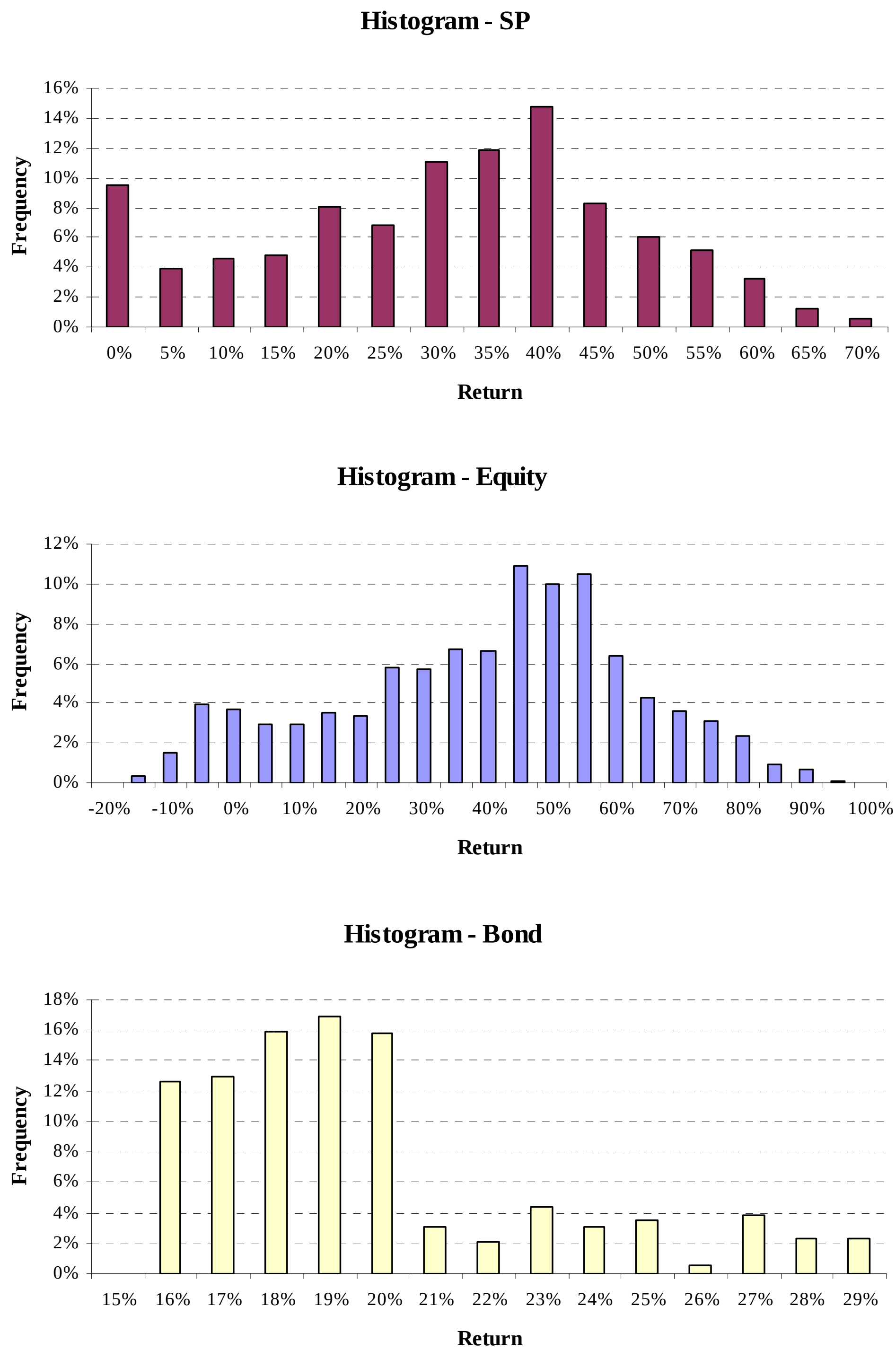


Figure 6.2.2.1: Histograms for SP, equity and bonds (for 4.5 year period)

In Figure 6.2.2.2, area A indicates that SP outperform equity in bear markets since it protects capital and limits the return at zero. On the other hand, area B indicates that SP underperform equity in bull markets because it participates only for some portion in equity returns (on average 74.2%, see Appendix B). Compared to bonds, the result is again mixed. Whereas bonds are fixed income securities, SP enables its investors to invest in equity and get the opportunity of gaining higher returns, as well as underperformance of equity to bond investments to some extent. Thus, area C indicates that SP can underperform bonds in relatively bear markets whereas area D indicates that SP can outperform bonds in relative bull markets.

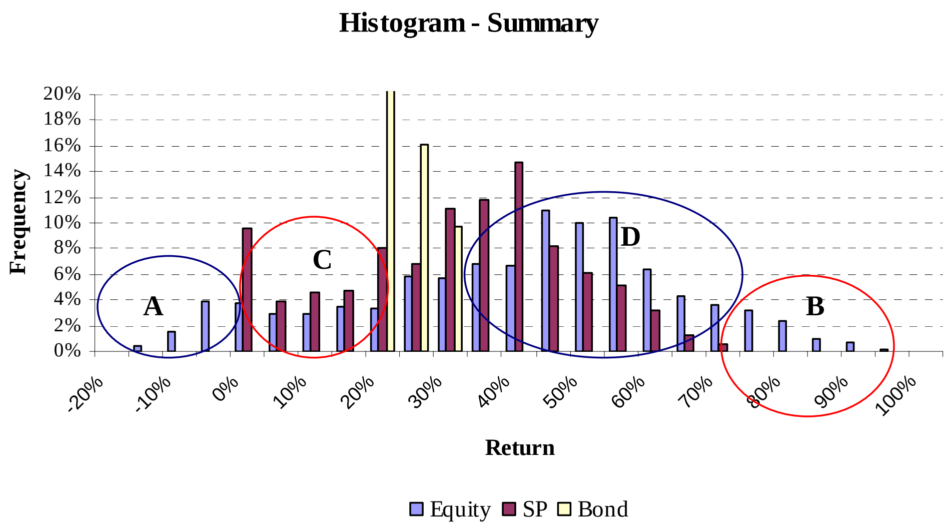


Figure 6.2.2.2: Histogram summary for three asset classes (for 4.5 year period)

The surface between A and B confirms findings that structured products offer consistency of returns. (see page 11)

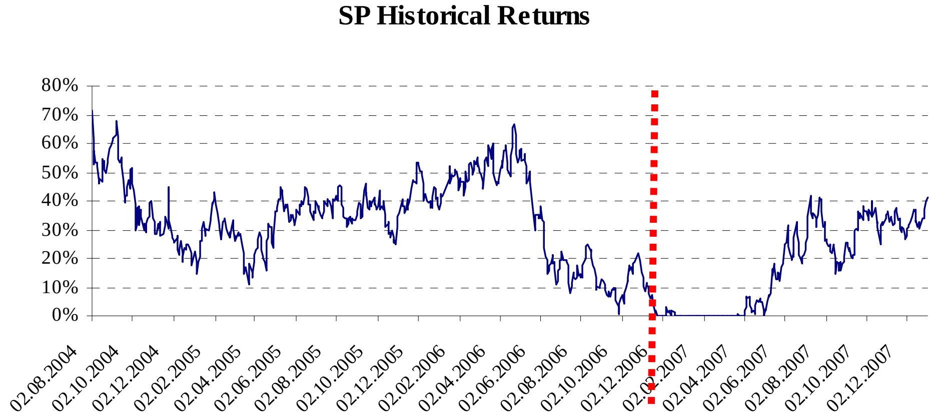


Figure 6.2.2.3: Historical returns of SP

Figure 6.2.2.3 shows the historical returns SP obtained over the full observation period. The area to the right of the red line shows the observations of two year time horizon. Indeed, the short observation period is not a good indicator of the true historical returns, since it starts in a period consecutive negative equity returns resulting in zero returns for SP. This again justifies the fact that a longer time horizon omits the problem of timing for SP and shows more relevant results on average.

In terms of volatility features of these assets, equity has the highest and bonds have the lowest volatility, as expected. (Table 6.2.2.2) Again, it is observed that SP's volatility is closer to bond volatility due to the higher weight of zero coupon bonds in the structure of the product. The zero coupon bonds have an average 82.7% weight in a SP. (Appendix B) From the risk point of view, again SPs exclude downside volatility.

Volatilities	**Equity**	**Bonds**	**SP**
Max. Std. Dev.	37.6%	1.2%	11.1%
Min. Std. Dev.	24.4%	0.6%	2.8%
Avg. Std. Dev.	29.0%	0.7%	4.2%

Table 6.2.2.2: Volatilities for three asset classes in 4.5 year observation period

Following the calculation of average returns and volatilities for each asset class, it is again possible to determine feasible and efficient sets, as wells as Sharpe ratios of different synthetic portfolios in the light of information below (Table 6.2.2.3):

Risk-Return Matrix	**E(r)**	σ
Equity	37.1%	29.0%
Bonds	19.4%	0.7%
SP	28.4%	4.2%

Table 6.2.2.3: Average Risk-Return Matrix for 4.5 year observation period

Graphically this is shown in Figure 6.2.2.4:

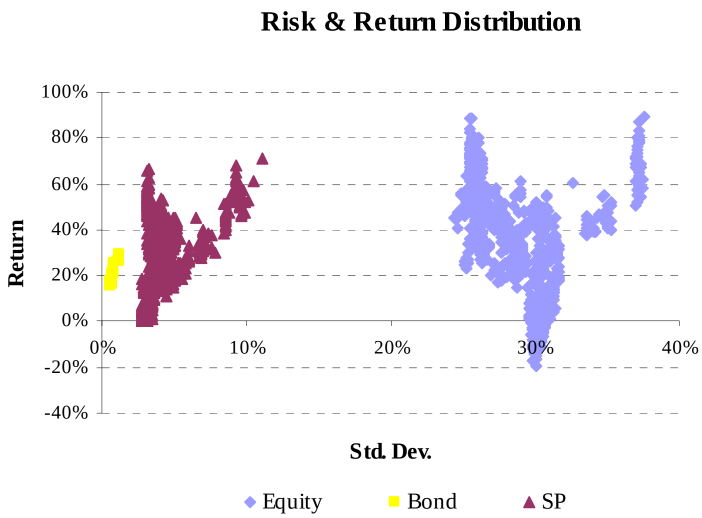


Figure 6.2.2.4: Risk & Return distribution for 4.5 year observation period

Feasible and Efficient Sets & Sharpe Ratios:

For a 4.5 year time horizon, some synthetic portfolios are also constructed by using expected returns and standard deviations of equity, bonds and SP. To do so, correlation matrix for these assets is again formed. (Table 6.2.2.4)

Correlation Matrix	**Equity**	**Bond**	**SP**
Equity	1		
Bond	5.9%	1	
SP	99.4%	6.0%	1

Table 6.2.2.4: Correlation Matrix for 4.5 year observation period

The synthetic portfolios which are constructed on the basis of abovementioned correlations and previously calculated average returns and standard deviations are as shown in Table 6.2.2.5.

Before analyzing feasible and efficient sets, the sharpe ratios of these portfolios indicate that the portfolio with the highest Sharpe ratio, i.e. the portfolio offering the highest amount of return for a given amount of risk, is the portfolio combining 90% bonds and 10% SP. (Sharpe Ratio of 4.003) To calculate the Sharpe Ratio, a risk free interest rate of 17% was again chosen. Actually, a series of risk free interest rates was used ranging between 5% and 20%. Observation showed that for any given risk free interest rate between 14.5% and 18%, the same portfolio seemed to be optimal. For higher interest rates, an increasing weight of SP offered higher Sharpe ratios.

	E(r)	**σ**		**E(r)**	**σ**		**E(r)**	**σ**
Equity	37.1%	29.0%	**Bond**	19.4%	0.7%	**Equity**	37.1%	29.0%
Bond	19.4%	0.7%	**SP**	28.4%	4.2%	**SP**	28.4%	4.2%
Corr:	5.9%		**Corr:**	6.0%		**Corr:**	99.4%	
R(f):	17%		**R(f):**	17%		**R(f):**	17%	

#	**W(e)***	**E(r)**	**σ**	**SR****	**#**	**W(b)***	**E(r)**	**σ**	**SR****	**#**	**W(e)***	**E(r)**	**σ**	**SR****
P1	0%	19.4%	0.7%	3.168	P1	0%	28.4%	4.2%	2.681	P1	0%	28.4%	4.2%	2.681
P2	10%	21.1%	3.0%	1.376	P2	10%	27.5%	3.8%	2.739	P2	10%	29.2%	6.7%	1.826
P3	20%	22.9%	5.9%	1.010	P3	20%	26.6%	3.4%	2.811	P3	20%	30.1%	9.2%	1.430
P4	30%	24.7%	8.7%	0.880	P4	30%	25.7%	3.0%	2.899	P4	30%	31.0%	11.7%	1.201
P5	40%	26.5%	11.6%	0.815	P5	40%	24.8%	2.6%	3.012	P5	40%	31.9%	14.1%	1.053
P6	50%	28.2%	14.5%	0.775	P6	50%	23.9%	2.2%	3.159	P6	50%	32.7%	16.6%	0.949
P7	60%	30.0%	17.4%	0.748	P7	60%	23.0%	1.8%	3.353	P7	60%	33.6%	19.1%	0.871
P8	70%	31.8%	20.3%	0.729	P8	70%	22.1%	1.4%	3.610	P8	70%	34.5%	21.6%	0.812
P9	80%	33.6%	23.2%	0.714	P9	80%	21.2%	1.1%	3.909	P9	80%	35.4%	24.0%	0.765
P10	90%	35.4%	26.1%	0.703	P10	90%	20.3%	0.8%	**4.003**	P10	90%	36.3%	26.5%	0.726
P11	100%	37.1%	29.0%	0.694	P11	100%	19.4%	0.7%	3.168	P11	100%	37.1%	29.0%	0.694

** W(e) refers to the weight of equity, W(b) refers to the weight of bond.*

*** Sharpe Ratio*

Table 6.2.2.5: Synthetic portfolios for 4.5 year observation period

The Graph below (Figure 6.2.2.5) shows the combination of feasible sets for the three asset classes on a 4.5 year time horizon. The northwest line indicates all combinatons between SPs, bonds and equity, and is therefore the efficient frontier. The line between Point A and Point B indicates the portfolios combining SPs and bonds. The portfolio with the highest Sharpe Ratio lies on that line. The Figure (6.2.2.6) shows this in more detail. The portfolio indicated by Point C shows the optimal portfolio. From the graph below (Figure 6.2.2.5), one can conclude that SP form a passage to go from an investment in 100% bonds to investments in Equity.

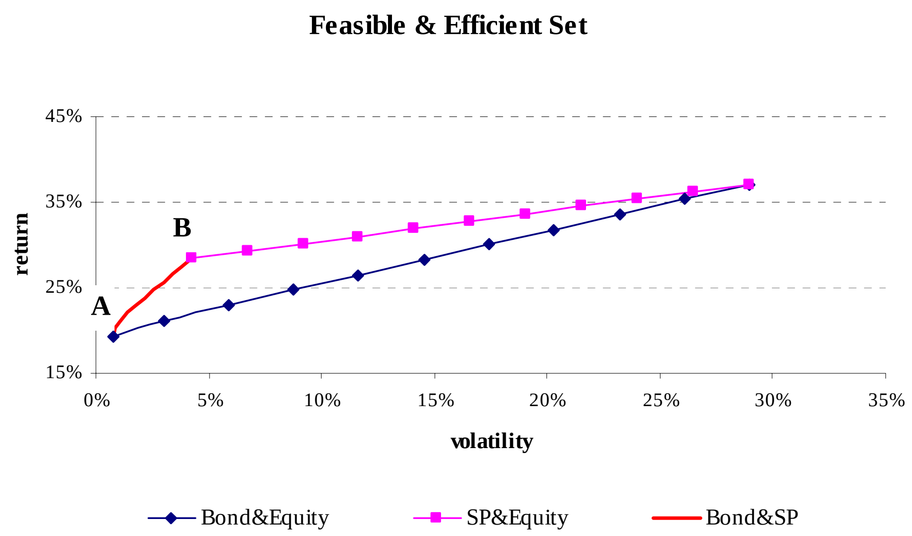


Figure 6.2.2.5: Feasible and Efficient sets for 4.5 observation period

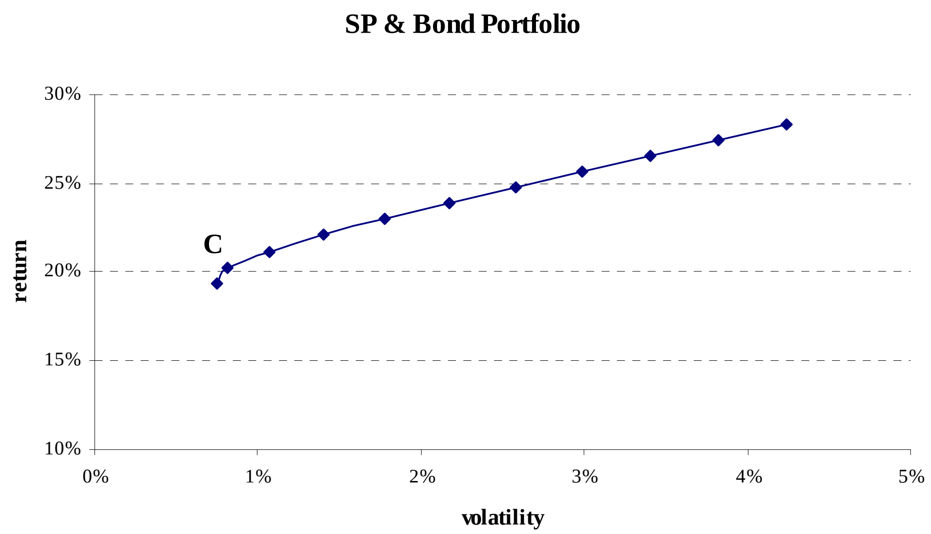


Figure 6.2.2.6: Portfolios containing SP & Bonds (for 4.5 year observation period)

This analysis clearly shows that a portfolio including structured products is the most optimal for Turkish investors.

As shown in Table 6.2.2.6 and Figure 6.2.2.7, when trying to solve for the most optimal portfolio including the 3 assets, no result can be found. This again indicates that SP can be seen as a passage for investors to shift from risk free investments (bonds) to the more risky equities.

	Weights			Portfolio	
Portfolio #	**Equity**	**Bonds**	**SP**	σ	**E(r)**
1	0.000	0.980	0.020	0.007	0.196
2	0.000	0.763	0.237	0.012	0.215
3	0.000	0.546	0.454	0.020	0.235
4	0.000	0.329	0.671	0.029	0.254
5	0.000	0.112	0.888	0.038	0.274
6	0.108	0.000	0.892	0.069	0.293
7	0.331	0.000	0.669	0.124	0.313
8	0.554	0.000	0.446	0.179	0.332
9	0.777	0.000	0.223	0.235	0.352
10	1.000	0.000	0.000	0.290	0.371

Table 6.2.2.6: Portfolios containing three assets (for 4.5 year observation period)

The same analysis was also employed for two year observation period, however, it was not meaningful since the standard deviation (risk) of SP was higher than bonds (3.5% vs. 0.7%) while the return of SP was lower (18.5% vs. 19%) in the same period.

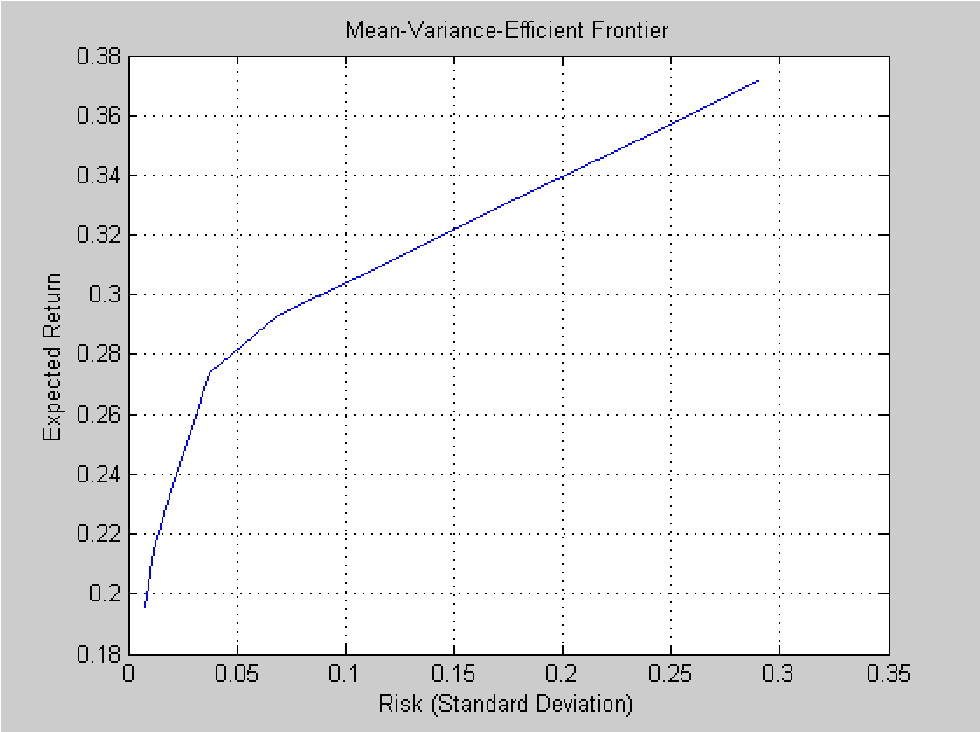


Figure 6.2.2.7: Portfolios containing three assets (for 4.5 year observation period)

7. CONCLUSION

In this study, it is tried to be investigated whether structured products have an impact on Turkish investors' risk & return profiles. After the literature review, an empirical study has been made where historical time series of equity, bonds and structured products were used for analysis and for calculation of optimal sets and Sharpe ratios.

The analysis was performed on two year and 4.5 year time horizons. On the two year time horizon, the results showed that structured products limited both downside risk and upside potential compared to direct equity investments. The optimal portfolio consists of 100% bond investments. The results also showed that the portfolios involving structured products were inefficient. However, a two year time horizon appears to be too short for detailed analysis since the dependency of market direction is too high for a small number of observations. (25% of observations yielded zero return for SP because of bearish equity markets)

In the calculations over a longer period, i.e. 4.5 years, the results are different. Indeed, histograms for equity returns showed a more normal pattern. Also, the weight of zero returns in SP is less important and the distribution also showed a more normal pattern. Still, structured products provide for more consistency of returns and offer an overperformance compared to bonds during equity upswings while at the same time limiting the risk during downwards equity trends. The risk compared to equity investments is significantly reduced because of the high weight of zero coupon bonds in SP. The optimal portfolio in this case is consisting out of 10% SP and 90% bonds. This portfolio offers the highest Sharpe ratio compared to other combinations of the three assets.

This shows that over a longer period, structured products may have an impact on the risk appetite of Turkish investors. SP may be a good alternative for risk averse investors to gradually shift to taking an exposure on Equity.

Some concluding remarks deserved mentioning:

1. In negative equity markets, structured products outperform equity but underperform bonds. This indicates an opportunity cost for investments in SP. (investors in SP are left in zero return and therefore missed out on rather stable and certain bond returns) Recent market development show that structured product developers are trying to cope with this opportunity cost by launching products with different payoff types:

- Products offering intermediary coupon payments
- Products offering minimum guaranteed returns at maturity
- Products offering upside potential in negative markets (put options)
- Products offering exposure to different asset classes, e.g. best of f/x and equity.

2. In positive equity markets, structured products underperform equity but outperform bonds. However, volatility of structured products is significantly lower than the volatility of equities.

The findings in the study indicate that structured products may be a passage for individual investors to shift from risk free to more risky investments. Should interest rates decrease in the future, the opportunity cost to invest in structured products will drop, hence investors might be more attracted to structured products and/or look for products on longer maturities.

8. REFERENCES

Agarwal, V. & Naik, N. Y. 2002, “Risks and portfolio decisions involving hedge funds”, ‘Unpublished Manuscript’.

Alexander, G. J. & Sharpe, W. F. & Bailey, J. V. (eds) 2001, *Fundamentals of Investments*, Third Edition, Prentice Hall, New Jersey.

Capital Market Factsheet. 11 April 2008. TSPAKB. 27 April 2008. http://www.tspakb.org.tr/index.htm

Chan, N. & Getmansky, M. & Haas, S. M. & Lo, A. W. 2006, ‘Do hedge funds increase systemic risk’, *Federal Reserve Bank of Atlanta Economic Review*, Fourth Quarter 2006, pp. 49-75.

Delbecque, B. 2008, ‘Trends in the European investment fund industry in the fourth quarter of 2007 and results for the full-year 2007’, *EFAMA Quarterly Statistical Review*, March 2008, no. 32, p. 2.

Donselaar, J. 1999, “Guaranteed returns: risk assured?”, ‘Unpublished Manuscript’.

EFAMA Fact Book 2007: The Reference Tool on the European Investment Fund Industry 2007, EFAMA, Brussels.

Friedman, M. & Savage, L. J. 1948, ‘The utility analysis of choices involving risk’, *The Journal of Political Economy*, vol. 56, no. 4, pp. 279-304.

Frydenberg, S. & Lindset, S. & Westgaard, S. 2007, “Hedge fund return statistics 1994-2005”, ‘Unpublished Manuscript’.

Fung, W. & Hsieh, D. A. 2000, “Measuring the market impact of hedge funds” ‘Unpublished Manuscript’.

Guven, Cagatay. “The Mutual Funds in the Turkish Financial Markets.” MBA Diss., The Izmir University of Economics, 2006.

Hull, J. C. (eds) 2003, *Options, Futures, AND Other Derivatives*, Fifth Edition, Prentice Hall, New Jersey.

Lancaster, B. P. & Prince, J. T. *Understanding hedge fund linked principal protected securities*. 12 May 2003. Wachovia Securities Inc. 30 January 2008. http://www.securitization.net/pdf/Hedge_Fund_051203.pdf

Market Overview - European Market Background. 7 March 2008. Structured Retail Products. 23 April 2008. http://www.structuredretailproducts.com/module.php?moduleID=1&sectionID=7

Markowitz, H. 1952, ‘The utility of wealth’, *The Journal of Political Economy*, vol. 60, no. 2, pp. 151-158.

Matthias, S. & Marras, G. *EFAMA’s comments on the commission’s call for evidence on the need for a coherent approach to product transparency and distribution requirements for ‘substitute’ retail investment products*. 31 January 2008. EFAMA. 19 February 2008. http://www.efama.org/55PositionPapers/2008/substituteproducts/documentfile

Miyazaki, K. 2005, ‘Choosing between bonds and equities under long-term risk Constraints’, *IIE Transactions*, 37, pp. 907-915.

Moustafa, Yulvie. “Relationship Between Risk and Return in Portfolio Management and Capital Asset Pricing Model.” MBA Diss., Dokuz Eylul University, 2007.

Schneeweis, T. & Karavas, V. N. & Georgiev, G. *Alternative investments in the institutional portfolio*. August 2002. Alternative Investment Management Association (AIMA). 3 May 2008. http://www.aima.org/uploads/AltInvinInstPortMay2002.pdf

Schneeweis, T. & Georgiev, G. *The benefits of managed futures*. June 2002. Alternative Investment Management Association (AIMA). 3 May 2008. http://www.aima.org/uploads/BenefitsofManagedFutures2002.pdf

Sharpe, W. F. 1994, ‘The Shape Ratio’, *Journal of Portfolio Management*, vol.21, no. 1, pp. 49-58.

Sharpe, W. F. 1966, ‘Mutual Fund Performance’, *Journal of Business*, vol. 39, pp. 119-138.

The UCITS directive and guaranteed/capital protected funds. 8 November 2002. EFAMA. 19 February 2008. http://www.efama.org/30Documents/20InvestmentManagement/0001Products/EFAMA%20Documents/UCITS_Dir_Posiion_Paper_6_12_2002/documentfile

TKYD March 2008 Bulletin. 11 April 2008. TKYD. 27 April 2008. http://www.tkyd.org.tr/data/T/TKYD%20Mart%202008%20Bülteni.doc

Verstraete, Jeroen. Personal Interview by Mustafa Kemal Ozmen. Istanbul. 12 April 2008.

9. APPENDICES

9.1 APPENDIX A: Creation of Structured Products for two year observation period

				Creation of Structured Products		
Date	**ISE 30**	**Int. Rate**	**Call Price**	**Weight of ZC Bonds**	**Weight of Option**	**Participation Rate**
Average			**20.83%**	**84.62%**	**15.38%**	**73.69%**
02/01/2006	50,551	14.91%	17.87%	87.03%	12.97%	72.59%
03/01/2006	51,838	14.85%	17.85%	87.07%	12.93%	72.45%
04/01/2006	52,836	14.84%	17.81%	87.07%	12.93%	72.56%
05/01/2006	53,248	14.84%	17.81%	87.08%	12.92%	72.54%
06/01/2006	53,520	14.84%	17.76%	87.08%	12.92%	72.77%
16/01/2006	56,254	14.83%	17.89%	87.08%	12.92%	72.19%
17/01/2006	56,986	14.82%	17.88%	87.09%	12.91%	72.22%
18/01/2006	55,060	14.79%	17.94%	87.11%	12.89%	71.85%
19/01/2006	56,433	14.78%	17.96%	87.12%	12.88%	71.71%
20/01/2006	57,532	14.79%	17.98%	87.12%	12.88%	71.67%
23/01/2006	56,592	14.76%	17.96%	87.14%	12.86%	71.62%
24/01/2006	57,278	14.74%	17.95%	87.15%	12.85%	71.57%
25/01/2006	58,984	14.75%	18.00%	87.15%	12.85%	71.40%
26/01/2006	58,941	14.75%	17.98%	87.15%	12.85%	71.51%
27/01/2006	58,296	14.74%	17.98%	87.15%	12.85%	71.48%
30/01/2006	57,598	14.76%	18.00%	87.14%	12.86%	71.47%
31/01/2006	56,989	14.76%	18.00%	87.14%	12.86%	71.45%
01/02/2006	57,896	14.78%	18.02%	87.12%	12.88%	71.47%
02/02/2006	57,228	14.74%	18.01%	87.15%	12.85%	71.37%
03/02/2006	56,377	14.74%	18.01%	87.15%	12.85%	71.36%
06/02/2006	57,267	14.74%	18.02%	87.15%	12.85%	71.32%
07/02/2006	56,941	14.75%	18.01%	87.15%	12.85%	71.39%
08/02/2006	55,865	14.75%	18.03%	87.15%	12.85%	71.30%
09/02/2006	56,114	14.74%	18.01%	87.15%	12.85%	71.33%
10/02/2006	57,176	14.76%	18.04%	87.14%	12.86%	71.30%

13/02/2006	56,097	14.79%	18.03%	87.12%	12.88%	71.45%
14/02/2006	55,475	14.77%	18.02%	87.13%	12.87%	71.39%
15/02/2006	55,953	14.77%	18.01%	87.13%	12.87%	71.43%
16/02/2006	58,108	14.73%	18.07%	87.16%	12.84%	71.05%
17/02/2006	59,333	14.73%	18.09%	87.16%	12.84%	70.98%
20/02/2006	59,918	14.66%	18.03%	87.21%	12.79%	70.93%
21/02/2006	59,813	14.66%	17.98%	87.22%	12.78%	71.08%
22/02/2006	59,080	14.65%	17.99%	87.22%	12.78%	71.04%
23/02/2006	59,293	14.67%	17.97%	87.21%	12.79%	71.16%
24/02/2006	59,560	14.66%	17.97%	87.21%	12.79%	71.17%
27/02/2006	60,772	14.63%	17.97%	87.24%	12.76%	71.05%
28/02/2006	59,676	14.66%	18.00%	87.21%	12.79%	71.05%
01/03/2006	60,245	14.62%	17.94%	87.24%	12.76%	71.10%
02/03/2006	59,276	14.64%	17.96%	87.23%	12.77%	71.08%
03/03/2006	58,480	14.63%	17.93%	87.24%	12.76%	71.17%
06/03/2006	58,134	14.55%	17.86%	87.30%	12.70%	71.14%
07/03/2006	55,529	14.54%	17.97%	87.31%	12.69%	70.62%
08/03/2006	53,554	14.55%	18.06%	87.30%	12.70%	70.32%
09/03/2006	54,191	14.56%	18.07%	87.29%	12.71%	70.31%
10/03/2006	53,772	14.53%	18.06%	87.31%	12.69%	70.24%
13/03/2006	56,254	14.54%	18.18%	87.31%	12.69%	69.82%
14/03/2006	54,327	14.53%	18.24%	87.31%	12.69%	69.53%
15/03/2006	54,808	14.53%	18.25%	87.31%	12.69%	69.52%
16/03/2006	55,888	14.53%	18.23%	87.31%	12.69%	69.60%
17/03/2006	56,721	14.43%	18.17%	87.39%	12.61%	69.43%
20/03/2006	56,266	14.44%	18.04%	87.38%	12.62%	69.94%
21/03/2006	56,303	14.44%	17.97%	87.38%	12.62%	70.21%
22/03/2006	56,073	14.42%	17.89%	87.40%	12.60%	70.42%
23/03/2006	56,225	14.41%	17.83%	87.40%	12.60%	70.66%
24/03/2006	54,454	14.42%	17.87%	87.40%	12.60%	70.53%
27/03/2006	53,709	14.44%	17.83%	87.38%	12.62%	70.76%
28/03/2006	52,448	14.36%	17.79%	87.45%	12.55%	70.55%
29/03/2006	53,492	14.34%	17.79%	87.46%	12.54%	70.51%
30/03/2006	54,094	14.33%	17.74%	87.46%	12.54%	70.68%
31/03/2006	54,067	14.34%	17.73%	87.46%	12.54%	70.77%
03/04/2006	55,686	14.34%	17.77%	87.46%	12.54%	70.58%
04/04/2006	55,777	14.32%	17.66%	87.47%	12.53%	70.92%
05/04/2006	55,713	14.32%	17.66%	87.47%	12.53%	70.93%

06/04/2006	55,245	14.25%	17.62%	87.53%	12.47%	70.80%
07/04/2006	55,986	14.26%	17.63%	87.52%	12.48%	70.81%
10/04/2006	54,409	14.22%	17.65%	87.55%	12.45%	70.55%
11/04/2006	54,018	14.22%	17.65%	87.55%	12.45%	70.56%
12/04/2006	53,482	14.19%	17.64%	87.57%	12.43%	70.47%
13/04/2006	52,725	14.22%	17.65%	87.55%	12.45%	70.55%
14/04/2006	53,088	14.22%	17.64%	87.55%	12.45%	70.58%
17/04/2006	52,631	14.23%	17.65%	87.55%	12.45%	70.58%
18/04/2006	54,018	14.22%	17.61%	87.55%	12.45%	70.68%
19/04/2006	55,229	14.21%	17.58%	87.55%	12.45%	70.79%
20/04/2006	55,381	14.21%	17.55%	87.55%	12.45%	70.92%
21/04/2006	57,036	14.21%	17.52%	87.56%	12.44%	71.03%
24/04/2006	57,294	14.21%	17.52%	87.56%	12.44%	71.03%
25/04/2006	57,396	14.20%	17.51%	87.57%	12.43%	71.02%
26/04/2006	56,530	14.18%	17.51%	87.58%	12.42%	70.94%
27/04/2006	55,200	14.14%	17.53%	87.61%	12.39%	70.69%
28/04/2006	55,191	14.04%	17.46%	87.69%	12.31%	70.54%
01/05/2006	55,505	14.09%	17.46%	87.65%	12.35%	70.74%
02/05/2006	56,028	14.08%	17.42%	87.66%	12.34%	70.86%
03/05/2006	56,276	14.08%	17.42%	87.66%	12.34%	70.86%
04/05/2006	55,567	14.12%	17.41%	87.63%	12.37%	71.05%
05/05/2006	55,320	14.17%	17.44%	87.59%	12.41%	71.15%
08/05/2006	56,009	14.19%	17.45%	87.58%	12.42%	71.22%
09/05/2006	55,920	14.20%	17.43%	87.56%	12.44%	71.33%
10/05/2006	54,565	14.27%	17.51%	87.52%	12.48%	71.30%
11/05/2006	54,672	14.32%	17.53%	87.48%	12.52%	71.45%
12/05/2006	52,376	14.38%	17.68%	87.43%	12.57%	71.09%
15/05/2006	50,634	14.53%	17.84%	87.31%	12.69%	71.10%
16/05/2006	51,434	14.65%	17.91%	87.23%	12.77%	71.34%
17/05/2006	50,738	14.71%	17.96%	87.18%	12.82%	71.41%
18/05/2006	49,882	14.80%	18.01%	87.11%	12.89%	71.59%
22/05/2006	45,805	14.87%	18.45%	87.05%	12.95%	70.15%
23/05/2006	46,881	15.10%	18.60%	86.88%	13.12%	70.53%
24/05/2006	45,178	15.09%	18.67%	86.89%	13.11%	70.23%
25/05/2006	46,107	15.22%	18.63%	86.79%	13.21%	70.88%
26/05/2006	48,633	15.66%	19.04%	86.46%	13.54%	71.13%
29/05/2006	48,995	15.85%	19.15%	86.32%	13.68%	71.46%
30/05/2006	47,594	15.85%	19.20%	86.32%	13.68%	71.27%

31/05/2006	47,916	15.85%	19.19%	86.32%	13.68%	71.32%
01/06/2006	48,108	16.83%	19.72%	85.59%	14.41%	73.04%
02/06/2006	49,322	16.92%	19.80%	85.53%	14.47%	73.09%
05/06/2006	47,674	18.04%	20.51%	84.72%	15.28%	74.52%
06/06/2006	46,975	18.28%	20.64%	84.55%	15.45%	74.88%
07/06/2006	46,030	18.33%	20.69%	84.51%	15.49%	74.89%
08/06/2006	44,209	18.72%	20.98%	84.23%	15.77%	75.19%
09/06/2006	43,390	18.71%	20.99%	84.24%	15.76%	75.11%
12/06/2006	42,767	18.72%	21.00%	84.23%	15.77%	75.09%
13/06/2006	40,679	18.75%	21.13%	84.21%	15.79%	74.73%
14/06/2006	41,242	19.15%	21.37%	83.93%	16.07%	75.22%
15/06/2006	42,148	19.73%	21.72%	83.52%	16.48%	75.87%
16/06/2006	42,782	19.99%	21.87%	83.34%	16.66%	76.16%
19/06/2006	43,907	20.07%	21.94%	83.29%	16.71%	76.16%
20/06/2006	43,691	20.12%	21.97%	83.25%	16.75%	76.25%
21/06/2006	42,679	20.16%	22.02%	83.22%	16.78%	76.20%
22/06/2006	43,313	20.30%	22.11%	83.12%	16.88%	76.33%
23/06/2006	41,949	20.96%	22.54%	82.67%	17.33%	76.87%
26/06/2006	40,438	21.89%	23.14%	82.04%	17.96%	77.60%
27/06/2006	41,217	24.28%	24.56%	80.46%	19.54%	79.57%
28/06/2006	42,265	26.44%	25.86%	79.09%	20.91%	80.88%
29/06/2006	43,222	26.30%	25.78%	79.18%	20.82%	80.78%
30/06/2006	44,734	25.22%	25.18%	79.86%	20.14%	79.97%
03/07/2006	44,836	23.06%	23.92%	81.26%	18.74%	78.37%
04/07/2006	46,130	21.98%	23.32%	81.98%	18.02%	77.28%
05/07/2006	44,661	21.55%	23.09%	82.27%	17.73%	76.78%
06/07/2006	45,121	22.13%	23.43%	81.88%	18.12%	77.34%
07/07/2006	45,774	22.12%	23.42%	81.89%	18.11%	77.33%
10/07/2006	45,678	21.83%	23.25%	82.08%	17.92%	77.07%
11/07/2006	45,445	21.74%	23.20%	82.14%	17.86%	76.98%
12/07/2006	45,373	20.90%	22.72%	82.71%	17.29%	76.11%
13/07/2006	44,296	20.86%	22.72%	82.74%	17.26%	75.97%
14/07/2006	42,694	20.86%	22.78%	82.74%	17.26%	75.76%
17/07/2006	41,259	20.85%	22.82%	82.75%	17.25%	75.60%
18/07/2006	42,472	20.89%	22.87%	82.72%	17.28%	75.56%
19/07/2006	42,371	20.91%	22.88%	82.70%	17.30%	75.59%
20/07/2006	44,835	20.85%	22.99%	82.75%	17.25%	75.02%
21/07/2006	44,259	21.37%	23.29%	82.39%	17.61%	75.59%

24/07/2006	44,235	21.50%	23.36%	82.31%	17.69%	75.72%
25/07/2006	44,670	21.47%	23.35%	82.33%	17.67%	75.69%
26/07/2006	45,565	21.42%	23.34%	82.36%	17.64%	75.60%
27/07/2006	46,603	21.41%	23.35%	82.36%	17.64%	75.52%
28/07/2006	45,665	21.32%	23.30%	82.42%	17.58%	75.43%
31/07/2006	45,531	21.29%	23.27%	82.44%	17.56%	75.43%
01/08/2006	45,024	21.28%	23.27%	82.45%	17.55%	75.40%
02/08/2006	44,976	21.25%	23.25%	82.48%	17.52%	75.37%
03/08/2006	44,423	21.25%	23.26%	82.48%	17.52%	75.35%
04/08/2006	45,679	21.23%	23.28%	82.49%	17.51%	75.24%
07/08/2006	45,425	21.17%	23.24%	82.53%	17.47%	75.17%
08/08/2006	46,234	21.17%	23.25%	82.53%	17.47%	75.15%
09/08/2006	47,526	21.07%	23.22%	82.60%	17.40%	74.95%
10/08/2006	47,378	20.97%	23.17%	82.67%	17.33%	74.83%
11/08/2006	47,371	20.94%	23.14%	82.69%	17.31%	74.81%
14/08/2006	47,647	20.84%	23.09%	82.75%	17.25%	74.69%
15/08/2006	47,935	20.85%	23.08%	82.75%	17.25%	74.75%
16/08/2006	48,810	20.80%	23.01%	82.78%	17.22%	74.83%
17/08/2006	47,907	20.66%	22.95%	82.88%	17.12%	74.61%
18/08/2006	47,228	20.48%	22.86%	83.00%	17.00%	74.37%
21/08/2006	46,852	20.38%	22.80%	83.07%	16.93%	74.26%
22/08/2006	46,832	20.23%	22.72%	83.17%	16.83%	74.09%
23/08/2006	46,863	20.21%	22.69%	83.19%	16.81%	74.09%
24/08/2006	46,254	20.22%	22.69%	83.18%	16.82%	74.11%
25/08/2006	46,590	20.20%	22.68%	83.19%	16.81%	74.10%
28/08/2006	46,373	20.23%	22.70%	83.17%	16.83%	74.14%
29/08/2006	46,663	20.22%	22.68%	83.18%	16.82%	74.15%
31/08/2006	47,161	20.27%	22.71%	83.14%	16.86%	74.21%
01/09/2006	47,314	20.27%	22.71%	83.14%	16.86%	74.21%
04/09/2006	48,364	20.29%	22.70%	83.13%	16.87%	74.31%
05/09/2006	48,318	20.25%	22.62%	83.16%	16.84%	74.45%
06/09/2006	47,628	20.26%	22.63%	83.15%	16.85%	74.44%
07/09/2006	47,257	20.27%	22.64%	83.14%	16.86%	74.45%
08/09/2006	47,094	20.28%	22.65%	83.14%	16.86%	74.46%
11/09/2006	46,856	20.40%	22.70%	83.06%	16.94%	74.63%
12/09/2006	47,437	20.45%	22.74%	83.02%	16.98%	74.67%
13/09/2006	47,618	20.42%	22.69%	83.04%	16.96%	74.72%
14/09/2006	47,284	20.48%	22.72%	83.00%	17.00%	74.81%

15/09/2006	48,215	20.48%	22.74%	83.00%	17.00%	74.77%
18/09/2006	48,172	20.49%	22.74%	82.99%	17.01%	74.78%
19/09/2006	48,325	20.52%	22.74%	82.97%	17.03%	74.87%
20/09/2006	48,234	20.52%	22.74%	82.98%	17.02%	74.86%
21/09/2006	47,667	20.53%	22.75%	82.96%	17.04%	74.86%
22/09/2006	45,938	21.18%	23.17%	82.52%	17.48%	75.43%
25/09/2006	45,527	21.24%	23.21%	82.48%	17.52%	75.48%
26/09/2006	45,973	21.32%	23.25%	82.43%	17.57%	75.58%
27/09/2006	46,453	21.38%	23.29%	82.38%	17.62%	75.65%
28/09/2006	47,113	21.49%	23.35%	82.31%	17.69%	75.75%
29/09/2006	46,608	21.51%	23.37%	82.30%	17.70%	75.75%
02/10/2006	46,785	21.91%	23.59%	82.03%	17.97%	76.20%
03/10/2006	46,623	21.89%	23.56%	82.04%	17.96%	76.23%
04/10/2006	45,970	21.93%	23.59%	82.02%	17.98%	76.24%
05/10/2006	46,697	21.98%	23.59%	81.98%	18.02%	76.39%
06/10/2006	46,420	21.83%	23.44%	82.08%	17.92%	76.43%
09/10/2006	46,626	21.74%	23.36%	82.14%	17.86%	76.44%
10/10/2006	47,380	21.75%	23.31%	82.13%	17.87%	76.66%
11/10/2006	47,650	21.73%	23.29%	82.15%	17.85%	76.63%
12/10/2006	48,453	21.69%	23.28%	82.18%	17.82%	76.55%
13/10/2006	48,703	21.53%	23.18%	82.28%	17.72%	76.43%
16/10/2006	49,398	21.48%	23.12%	82.32%	17.68%	76.46%
17/10/2006	48,667	21.49%	23.09%	82.31%	17.69%	76.60%
18/10/2006	50,480	21.49%	23.12%	82.31%	17.69%	76.48%
19/10/2006	50,465	21.46%	23.10%	82.33%	17.67%	76.48%
20/10/2006	50,108	21.43%	23.08%	82.35%	17.65%	76.46%
26/10/2006	51,384	21.30%	23.00%	82.44%	17.56%	76.34%
27/10/2006	51,602	21.29%	22.97%	82.45%	17.55%	76.39%
30/10/2006	50,783	21.12%	22.89%	82.56%	17.44%	76.17%
31/10/2006	51,403	21.09%	22.87%	82.58%	17.42%	76.15%
01/11/2006	51,381	21.08%	22.86%	82.59%	17.41%	76.15%
02/11/2006	49,869	21.09%	22.91%	82.58%	17.42%	76.02%
03/11/2006	49,393	21.09%	22.91%	82.58%	17.42%	76.02%
06/11/2006	49,908	21.09%	22.91%	82.58%	17.42%	76.02%
07/11/2006	50,612	21.08%	22.87%	82.59%	17.41%	76.14%
08/11/2006	49,979	21.02%	22.81%	82.63%	17.37%	76.15%
09/11/2006	50,108	21.03%	22.81%	82.62%	17.38%	76.18%
10/11/2006	49,681	20.97%	22.76%	82.66%	17.34%	76.17%

13/11/2006	48,912	20.95%	22.76%	82.68%	17.32%	76.11%
14/11/2006	49,650	20.94%	22.76%	82.69%	17.31%	76.06%
15/11/2006	49,660	20.92%	22.72%	82.70%	17.30%	76.15%
16/11/2006	49,159	20.90%	22.70%	82.71%	17.29%	76.17%
17/11/2006	48,245	20.88%	22.70%	82.73%	17.27%	76.09%
20/11/2006	47,995	20.88%	22.70%	82.73%	17.27%	76.09%
21/11/2006	48,208	20.88%	22.69%	82.73%	17.27%	76.13%
22/11/2006	47,109	20.95%	22.75%	82.68%	17.32%	76.13%
23/11/2006	47,488	20.93%	22.74%	82.69%	17.31%	76.11%
24/11/2006	46,902	20.93%	22.74%	82.69%	17.31%	76.10%
27/11/2006	47,878	20.93%	22.76%	82.69%	17.31%	76.06%
28/11/2006	46,562	20.93%	22.76%	82.69%	17.31%	76.06%
29/11/2006	47,670	20.95%	22.77%	82.68%	17.32%	76.08%
30/11/2006	47,720	20.94%	22.76%	82.69%	17.31%	76.07%
01/12/2006	47,753	20.92%	22.75%	82.70%	17.30%	76.06%
04/12/2006	47,048	21.00%	22.77%	82.65%	17.35%	76.20%
05/12/2006	47,744	21.03%	22.79%	82.63%	17.37%	76.24%
06/12/2006	47,668	21.02%	22.78%	82.63%	17.37%	76.24%
07/12/2006	49,953	21.01%	22.88%	82.64%	17.36%	75.88%
08/12/2006	49,184	21.02%	22.89%	82.63%	17.37%	75.89%
11/12/2006	49,281	21.01%	22.88%	82.64%	17.36%	75.89%
12/12/2006	48,859	20.99%	22.86%	82.65%	17.35%	75.88%
13/12/2006	48,318	20.99%	22.86%	82.65%	17.35%	75.87%
14/12/2006	49,165	20.98%	22.83%	82.66%	17.34%	75.96%
15/12/2006	50,019	20.98%	22.83%	82.66%	17.34%	75.98%
18/12/2006	49,508	20.98%	22.82%	82.66%	17.34%	75.99%
19/12/2006	48,583	20.98%	22.84%	82.66%	17.34%	75.94%
20/12/2006	48,444	20.98%	22.83%	82.66%	17.34%	75.95%
21/12/2006	48,611	19.81%	22.17%	83.47%	16.53%	74.58%
22/12/2006	48,768	19.81%	22.17%	83.46%	16.54%	74.59%
25/12/2006	48,182	19.81%	22.17%	83.46%	16.54%	74.58%
26/12/2006	48,255	19.81%	22.16%	83.46%	16.54%	74.61%
27/12/2006	47,961	19.81%	22.17%	83.46%	16.54%	74.60%
28/12/2006	48,648	19.81%	22.17%	83.46%	16.54%	74.60%
29/12/2006	48,551	19.84%	22.18%	83.44%	16.56%	74.64%
04/01/2007	48,414	19.70%	22.10%	83.54%	16.46%	74.47%
05/01/2007	47,625	19.73%	22.13%	83.52%	16.48%	74.46%
08/01/2007	46,833	19.69%	22.10%	83.55%	16.45%	74.41%

09/01/2007	45,904	19.65%	22.10%	83.58%	16.42%	74.31%
10/01/2007	45,467	19.64%	22.10%	83.58%	16.42%	74.29%
11/01/2007	46,895	19.60%	22.09%	83.61%	16.39%	74.18%
12/01/2007	47,626	19.61%	22.09%	83.61%	16.39%	74.20%
15/01/2007	48,897	19.60%	22.12%	83.61%	16.39%	74.09%
16/01/2007	48,723	19.60%	22.12%	83.61%	16.39%	74.10%
17/01/2007	49,136	19.60%	22.00%	83.61%	16.39%	74.50%
18/01/2007	50,511	19.60%	22.03%	83.61%	16.39%	74.40%
19/01/2007	50,506	19.50%	21.92%	83.68%	16.32%	74.46%
22/01/2007	51,887	19.50%	21.92%	83.68%	16.32%	74.44%
23/01/2007	51,870	19.44%	21.87%	83.72%	16.28%	74.43%
24/01/2007	53,033	19.40%	21.86%	83.75%	16.25%	74.33%
25/01/2007	53,120	19.30%	21.79%	83.82%	16.18%	74.23%
26/01/2007	52,641	19.30%	21.75%	83.82%	16.18%	74.36%
29/01/2007	51,933	19.26%	21.74%	83.85%	16.15%	74.28%
30/01/2007	51,852	19.25%	21.73%	83.86%	16.14%	74.29%
31/01/2007	51,549	19.20%	21.70%	83.89%	16.11%	74.24%
01/02/2007	53,054	19.14%	21.70%	83.93%	16.07%	74.05%
02/02/2007	54,233	18.90%	21.57%	84.10%	15.90%	73.68%
05/02/2007	53,749	18.90%	21.57%	84.10%	15.90%	73.69%
06/02/2007	53,441	18.90%	21.56%	84.10%	15.90%	73.72%
07/02/2007	52,789	18.90%	21.56%	84.10%	15.90%	73.74%
08/02/2007	52,234	18.90%	21.56%	84.10%	15.90%	73.73%
09/02/2007	52,861	18.90%	21.55%	84.10%	15.90%	73.76%
12/02/2007	52,713	18.90%	21.55%	84.10%	15.90%	73.76%
13/02/2007	53,435	18.90%	21.54%	84.10%	15.90%	73.79%
14/02/2007	54,439	18.85%	21.51%	84.14%	15.86%	73.72%
15/02/2007	55,343	18.71%	21.44%	84.24%	15.76%	73.51%
16/02/2007	55,069	18.70%	21.43%	84.25%	15.75%	73.50%
19/02/2007	56,022	18.70%	21.38%	84.25%	15.75%	73.70%
20/02/2007	55,802	18.70%	21.35%	84.25%	15.75%	73.78%
21/02/2007	54,112	18.70%	21.39%	84.25%	15.75%	73.64%
22/02/2007	55,423	18.65%	21.40%	84.28%	15.72%	73.47%
23/02/2007	55,008	18.64%	21.38%	84.29%	15.71%	73.47%
26/02/2007	55,127	18.65%	21.39%	84.28%	15.72%	73.49%
27/02/2007	52,485	18.81%	21.59%	84.17%	15.83%	73.33%
28/02/2007	52,062	19.21%	21.80%	83.89%	16.11%	73.92%
01/03/2007	49,526	19.18%	21.87%	83.91%	16.09%	73.56%

02/03/2007	50,910	19.22%	21.93%	83.88%	16.12%	73.50%
05/03/2007	49,936	19.50%	22.10%	83.68%	16.32%	73.85%
06/03/2007	50,634	19.50%	22.10%	83.68%	16.32%	73.84%
07/03/2007	50,840	19.50%	22.10%	83.68%	16.32%	73.84%
08/03/2007	52,073	19.50%	22.03%	83.68%	16.32%	74.07%
09/03/2007	52,966	19.29%	21.87%	83.83%	16.17%	73.96%
12/03/2007	52,883	19.40%	21.92%	83.75%	16.25%	74.11%
13/03/2007	52,459	19.39%	21.92%	83.76%	16.24%	74.10%
14/03/2007	50,853	19.39%	21.86%	83.76%	16.24%	74.30%
15/03/2007	51,761	19.39%	21.82%	83.76%	16.24%	74.43%
16/03/2007	52,579	19.38%	21.82%	83.77%	16.23%	74.39%
19/03/2007	52,616	19.30%	21.76%	83.82%	16.18%	74.35%
20/03/2007	52,464	19.30%	21.75%	83.82%	16.18%	74.39%
21/03/2007	53,173	19.29%	21.75%	83.83%	16.17%	74.36%
22/03/2007	54,299	19.22%	21.73%	83.88%	16.12%	74.19%
23/03/2007	54,574	19.21%	21.72%	83.89%	16.11%	74.17%
26/03/2007	54,309	19.20%	21.72%	83.89%	16.11%	74.16%
27/03/2007	54,042	19.20%	21.67%	83.89%	16.11%	74.32%
28/03/2007	53,982	19.20%	21.66%	83.89%	16.11%	74.35%
29/03/2007	54,749	19.20%	21.64%	83.89%	16.11%	74.42%
30/03/2007	54,567	19.20%	21.63%	83.89%	16.11%	74.48%
02/04/2007	54,349	19.20%	21.62%	83.89%	16.11%	74.50%
03/04/2007	55,454	19.20%	21.64%	83.89%	16.11%	74.43%
04/04/2007	55,999	19.20%	21.60%	83.89%	16.11%	74.56%
05/04/2007	57,516	19.18%	21.63%	83.90%	16.10%	74.42%
06/04/2007	57,677	19.09%	21.57%	83.97%	16.03%	74.29%
09/04/2007	57,723	19.08%	21.56%	83.98%	16.02%	74.29%
10/04/2007	56,931	19.10%	21.58%	83.96%	16.04%	74.32%
11/04/2007	57,981	19.08%	21.54%	83.98%	16.02%	74.38%
12/04/2007	57,307	19.09%	21.55%	83.97%	16.03%	74.37%
13/04/2007	57,911	19.10%	21.56%	83.96%	16.04%	74.39%
16/04/2007	58,749	19.08%	21.54%	83.98%	16.02%	74.36%
17/04/2007	58,602	19.08%	21.55%	83.98%	16.02%	74.37%
18/04/2007	57,197	18.99%	21.52%	84.04%	15.96%	74.16%
19/04/2007	58,161	18.96%	21.48%	84.06%	15.94%	74.19%
20/04/2007	59,630	18.90%	21.45%	84.10%	15.90%	74.09%
24/04/2007	59,140	18.86%	21.44%	84.13%	15.87%	74.03%
25/04/2007	60,600	18.81%	21.39%	84.17%	15.83%	74.00%

26/04/2007	60,365	18.64%	21.30%	84.29%	15.71%	73.78%
27/04/2007	59,154	18.63%	21.31%	84.30%	15.70%	73.68%
30/04/2007	56,812	18.91%	21.53%	84.10%	15.90%	73.84%
01/05/2007	54,678	18.89%	21.57%	84.11%	15.89%	73.67%
02/05/2007	55,396	18.86%	21.56%	84.13%	15.87%	73.61%
03/05/2007	56,354	18.86%	21.57%	84.13%	15.87%	73.56%
04/05/2007	55,927	18.85%	21.56%	84.14%	15.86%	73.55%
07/05/2007	55,829	18.84%	21.56%	84.15%	15.85%	73.54%
08/05/2007	55,817	18.78%	21.51%	84.19%	15.81%	73.48%
09/05/2007	56,346	18.77%	21.51%	84.20%	15.80%	73.46%
10/05/2007	56,155	18.76%	21.50%	84.21%	15.79%	73.46%
11/05/2007	55,842	18.78%	21.51%	84.19%	15.81%	73.49%
14/05/2007	56,299	18.74%	21.47%	84.21%	15.79%	73.53%
15/05/2007	55,935	18.74%	21.47%	84.22%	15.78%	73.52%
16/05/2007	56,857	18.75%	21.40%	84.21%	15.79%	73.79%
17/05/2007	57,328	18.75%	21.34%	84.21%	15.79%	73.98%
18/05/2007	57,478	18.76%	21.34%	84.21%	15.79%	74.02%
21/05/2007	57,547	18.74%	21.32%	84.22%	15.78%	74.03%
22/05/2007	57,697	18.71%	21.28%	84.24%	15.76%	74.04%
23/05/2007	57,805	18.70%	20.94%	84.25%	15.75%	75.24%
24/05/2007	57,643	18.70%	20.91%	84.25%	15.75%	75.33%
25/05/2007	57,558	18.70%	20.84%	84.25%	15.75%	75.58%
28/05/2007	58,507	18.69%	20.83%	84.25%	15.75%	75.60%
29/05/2007	58,503	18.66%	20.67%	84.27%	15.73%	76.10%
30/05/2007	57,591	18.66%	20.67%	84.28%	15.72%	76.05%
31/05/2007	58,487	18.66%	20.64%	84.27%	15.73%	76.19%
01/06/2007	57,746	18.66%	20.65%	84.28%	15.72%	76.15%
04/06/2007	57,275	18.65%	20.65%	84.28%	15.72%	76.13%
05/06/2007	57,759	18.65%	20.62%	84.28%	15.72%	76.23%
06/06/2007	56,979	18.65%	20.57%	84.28%	15.72%	76.42%
07/06/2007	55,654	18.65%	20.59%	84.28%	15.72%	76.35%
08/06/2007	54,948	18.65%	20.57%	84.28%	15.72%	76.40%
11/06/2007	55,611	18.65%	20.50%	84.28%	15.72%	76.69%
12/06/2007	54,866	18.66%	20.49%	84.28%	15.72%	76.74%
13/06/2007	55,107	18.67%	20.49%	84.27%	15.73%	76.80%
14/06/2007	55,151	18.65%	20.34%	84.28%	15.72%	77.27%
15/06/2007	56,862	18.65%	20.38%	84.28%	15.72%	77.12%
18/06/2007	57,400	18.65%	20.36%	84.28%	15.72%	77.20%

19/06/2007	57,362	18.65%	20.35%	84.28%	15.72%	77.23%
20/06/2007	57,273	18.61%	20.29%	84.31%	15.69%	77.30%
21/06/2007	56,896	18.60%	20.29%	84.32%	15.68%	77.29%
22/06/2007	56,653	18.61%	20.27%	84.31%	15.69%	77.42%
25/06/2007	56,132	18.59%	20.25%	84.32%	15.68%	77.41%
26/06/2007	56,832	18.59%	20.20%	84.33%	15.67%	77.60%
27/06/2007	55,600	18.59%	20.15%	84.33%	15.67%	77.78%
28/06/2007	57,015	18.59%	20.17%	84.32%	15.68%	77.73%
29/06/2007	58,414	18.59%	20.17%	84.32%	15.68%	77.74%
02/07/2007	59,277	18.59%	20.15%	84.32%	15.68%	77.80%
03/07/2007	60,684	18.59%	20.12%	84.32%	15.68%	77.93%
04/07/2007	61,812	18.49%	20.07%	84.40%	15.60%	77.74%
05/07/2007	62,444	18.34%	19.94%	84.50%	15.50%	77.69%
06/07/2007	62,332	18.34%	19.89%	84.50%	15.50%	77.93%
09/07/2007	64,197	18.32%	19.91%	84.52%	15.48%	77.75%
10/07/2007	63,175	18.30%	19.91%	84.53%	15.47%	77.70%
11/07/2007	62,448	18.30%	19.92%	84.53%	15.47%	77.66%
12/07/2007	65,128	18.28%	20.00%	84.54%	15.46%	77.29%
13/07/2007	65,267	18.25%	19.98%	84.57%	15.43%	77.25%
16/07/2007	64,876	18.25%	19.95%	84.57%	15.43%	77.37%
17/07/2007	64,841	18.20%	19.84%	84.60%	15.40%	77.61%
18/07/2007	64,143	18.20%	19.78%	84.60%	15.40%	77.85%
19/07/2007	67,343	18.19%	19.86%	84.61%	15.39%	77.51%
20/07/2007	66,900	18.19%	19.86%	84.61%	15.39%	77.49%
23/07/2007	70,635	18.10%	19.79%	84.67%	15.33%	77.44%
24/07/2007	69,450	18.00%	19.74%	84.75%	15.25%	77.28%
25/07/2007	69,147	17.94%	19.71%	84.79%	15.21%	77.20%
26/07/2007	65,876	17.86%	19.79%	84.84%	15.16%	76.59%
27/07/2007	64,596	17.91%	19.82%	84.81%	15.19%	76.63%
30/07/2007	64,426	17.85%	19.76%	84.85%	15.15%	76.65%
31/07/2007	66,326	17.80%	19.75%	84.89%	15.11%	76.51%
01/08/2007	64,215	17.80%	19.81%	84.89%	15.11%	76.28%
02/08/2007	64,269	17.80%	19.80%	84.89%	15.11%	76.32%
03/08/2007	63,366	17.80%	19.81%	84.89%	15.11%	76.27%
06/08/2007	63,026	17.78%	19.79%	84.90%	15.10%	76.27%
07/08/2007	63,412	17.78%	19.75%	84.91%	15.09%	76.41%
08/08/2007	65,163	17.75%	19.77%	84.93%	15.07%	76.24%
09/08/2007	62,388	17.74%	19.86%	84.93%	15.07%	75.89%

10/08/2007	61,175	17.78%	19.86%	84.91%	15.09%	75.99%
13/08/2007	62,667	17.70%	19.84%	84.96%	15.04%	75.78%
14/08/2007	62,182	17.70%	19.85%	84.96%	15.04%	75.76%
15/08/2007	59,539	17.86%	20.05%	84.84%	15.16%	75.60%
16/08/2007	55,546	18.47%	20.64%	84.41%	15.59%	75.53%
17/08/2007	58,339	18.53%	20.79%	84.37%	15.63%	75.21%
20/08/2007	57,672	18.50%	20.76%	84.39%	15.61%	75.21%
21/08/2007	56,443	18.56%	20.81%	84.34%	15.66%	75.24%
22/08/2007	58,633	18.55%	20.87%	84.36%	15.64%	74.97%
23/08/2007	59,321	18.39%	20.78%	84.47%	15.53%	74.74%
24/08/2007	58,499	18.39%	20.80%	84.46%	15.54%	74.71%
27/08/2007	59,983	18.30%	20.76%	84.53%	15.47%	74.51%
28/08/2007	59,682	18.30%	20.76%	84.53%	15.47%	74.51%
29/08/2007	60,215	18.31%	20.77%	84.53%	15.47%	74.51%
31/08/2007	63,211	18.31%	20.88%	84.53%	15.47%	74.09%
03/09/2007	62,806	18.23%	20.84%	84.58%	15.42%	73.99%
04/09/2007	62,963	18.21%	20.83%	84.59%	15.41%	73.97%
05/09/2007	62,115	18.17%	20.79%	84.63%	15.37%	73.94%
06/09/2007	62,376	18.16%	20.79%	84.63%	15.37%	73.93%
07/09/2007	61,691	18.15%	20.78%	84.64%	15.36%	73.93%
10/09/2007	60,951	18.15%	20.78%	84.64%	15.36%	73.92%
11/09/2007	61,949	18.15%	20.79%	84.64%	15.36%	73.88%
12/09/2007	61,933	18.15%	20.79%	84.64%	15.36%	73.89%
13/09/2007	62,512	18.15%	20.79%	84.64%	15.36%	73.90%
14/09/2007	64,056	17.80%	20.62%	84.89%	15.11%	73.29%
17/09/2007	63,900	17.75%	20.58%	84.93%	15.07%	73.23%
18/09/2007	63,932	17.75%	20.57%	84.93%	15.07%	73.29%
19/09/2007	68,691	17.25%	20.56%	85.29%	14.71%	71.57%
20/09/2007	68,186	17.25%	20.56%	85.29%	14.71%	71.56%
21/09/2007	68,444	17.25%	20.56%	85.29%	14.71%	71.56%
24/09/2007	67,967	17.25%	20.55%	85.29%	14.71%	71.58%
25/09/2007	67,059	17.25%	20.49%	85.29%	14.71%	71.79%
26/09/2007	68,916	17.25%	20.52%	85.29%	14.71%	71.69%
27/09/2007	69,127	17.25%	20.52%	85.29%	14.71%	71.70%
28/09/2007	68,547	17.21%	20.50%	85.32%	14.68%	71.63%
01/10/2007	68,725	17.20%	20.48%	85.32%	14.68%	71.65%
02/10/2007	69,522	17.20%	20.48%	85.32%	14.68%	71.66%
03/10/2007	68,635	17.20%	20.49%	85.32%	14.68%	71.62%

04/10/2007	69,599	17.15%	20.47%	85.36%	14.64%	71.52%
05/10/2007	72,261	17.12%	20.51%	85.38%	14.62%	71.28%
08/10/2007	71,488	16.90%	20.38%	85.54%	14.46%	70.93%
09/10/2007	73,885	16.89%	20.43%	85.55%	14.45%	70.75%
10/10/2007	73,206	16.75%	20.35%	85.65%	14.35%	70.49%
11/10/2007	74,222	16.75%	20.35%	85.65%	14.35%	70.50%
15/10/2007	74,568	16.45%	20.18%	85.87%	14.13%	69.99%
16/10/2007	72,984	16.45%	20.20%	85.87%	14.13%	69.94%
17/10/2007	73,901	16.30%	20.12%	85.98%	14.02%	69.66%
18/10/2007	71,446	16.30%	20.17%	85.98%	14.02%	69.47%
19/10/2007	70,123	16.30%	20.18%	85.98%	14.02%	69.45%
22/10/2007	68,172	16.34%	20.18%	85.95%	14.05%	69.59%
23/10/2007	70,577	16.31%	20.22%	85.98%	14.02%	69.33%
24/10/2007	70,453	16.30%	20.22%	85.98%	14.02%	69.33%
25/10/2007	70,521	16.30%	20.19%	85.98%	14.02%	69.43%
26/10/2007	71,597	16.30%	20.20%	85.98%	14.02%	69.40%
30/10/2007	72,126	16.25%	20.15%	86.02%	13.98%	69.36%
31/10/2007	73,362	16.25%	20.16%	86.02%	13.98%	69.33%
01/11/2007	73,161	16.25%	20.16%	86.02%	13.98%	69.33%
02/11/2007	72,305	16.25%	20.12%	86.02%	13.98%	69.47%
05/11/2007	70,983	16.25%	20.14%	86.02%	13.98%	69.42%
06/11/2007	72,268	16.25%	20.15%	86.02%	13.98%	69.39%
07/11/2007	71,049	16.25%	20.15%	86.02%	13.98%	69.36%
08/11/2007	69,789	16.25%	20.16%	86.02%	13.98%	69.33%
09/11/2007	67,823	16.25%	20.21%	86.02%	13.98%	69.17%
12/11/2007	68,448	16.26%	20.21%	86.01%	13.99%	69.20%
13/11/2007	69,464	16.26%	20.20%	86.02%	13.98%	69.21%
14/11/2007	70,858	16.25%	20.21%	86.02%	13.98%	69.17%
15/11/2007	69,495	16.19%	20.20%	86.06%	13.94%	68.99%
16/11/2007	68,826	16.18%	20.19%	86.08%	13.92%	68.96%
19/11/2007	67,377	16.20%	20.21%	86.06%	13.94%	68.99%
20/11/2007	67,853	16.20%	20.21%	86.06%	13.94%	68.99%
21/11/2007	66,725	16.20%	20.22%	86.06%	13.94%	68.93%
22/11/2007	66,069	16.20%	20.20%	86.06%	13.94%	69.02%
23/11/2007	66,211	16.27%	20.24%	86.01%	13.99%	69.15%
26/11/2007	66,843	16.31%	20.25%	85.98%	14.02%	69.24%
27/11/2007	65,067	16.42%	20.33%	85.90%	14.10%	69.36%
28/11/2007	67,540	16.45%	20.38%	85.87%	14.13%	69.33%

29/11/2007	67,407	16.94%	20.62%	85.52%	14.48%	70.24%
30/11/2007	68,777	16.93%	20.64%	85.52%	14.48%	70.18%
03/12/2007	68,880	16.94%	20.64%	85.51%	14.49%	70.18%
04/12/2007	68,410	16.43%	20.35%	85.89%	14.11%	69.34%
05/12/2007	70,567	16.91%	20.65%	85.54%	14.46%	70.05%
06/12/2007	71,618	16.45%	20.40%	85.87%	14.13%	69.23%
07/12/2007	71,958	16.93%	20.56%	85.52%	14.48%	70.42%
10/12/2007	72,150	16.43%	20.27%	85.89%	14.11%	69.62%
11/12/2007	71,856	16.91%	20.54%	85.53%	14.47%	70.44%
12/12/2007	72,666	16.92%	20.54%	85.53%	14.47%	70.44%
13/12/2007	70,419	16.43%	20.31%	85.89%	14.11%	69.45%
14/12/2007	69,971	16.30%	20.23%	85.98%	14.02%	69.26%
17/12/2007	68,205	16.24%	20.23%	86.03%	13.97%	69.08%
18/12/2007	69,074	16.26%	20.24%	86.01%	13.99%	69.11%
19/12/2007	68,404	16.26%	20.22%	86.01%	13.99%	69.16%
24/12/2007	70,667	16.26%	20.27%	86.02%	13.98%	68.99%
25/12/2007	70,448	16.26%	20.27%	86.01%	13.99%	68.99%
26/12/2007	70,516	16.26%	20.27%	86.02%	13.98%	68.98%
27/12/2007	70,254	16.28%	20.27%	86.00%	14.00%	69.04%
28/12/2007	70,755	16.28%	20.28%	86.00%	14.00%	69.05%
31/12/2007	70,457	16.30%	20.29%	85.98%	14.02%	69.09%

9.2 APPENDIX B: Creation of Structured Products for 4.5 year observation period

				Creation of Structured Products		
Date	**ISE 30**	**Int. Rate**	**Call Price**	**Weight of ZC Bonds**	**Weight of Option**	**Participation Rate**
Average			**23.27%**	**82.70%**	**17.30%**	**74.20%**
01/08/2003	13,349	44.04%	40.63%	67.63%	32.37%	79.67%
04/08/2003	14,024	42.15%	39.32%	68.91%	31.09%	79.08%
05/08/2003	14,583	41.96%	38.81%	69.43%	30.57%	78.78%
06/08/2003	14,296	42.16%	37.88%	70.35%	29.65%	78.28%
07/08/2003	14,623	42.95%	37.80%	70.44%	29.56%	78.21%
08/08/2003	14,629	42.74%	37.89%	70.34%	29.66%	78.27%
11/08/2003	14,911	41.59%	38.28%	69.95%	30.05%	78.48%
12/08/2003	15,036	41.97%	38.17%	70.06%	29.94%	78.45%
13/08/2003	15,085	41.43%	37.60%	70.63%	29.37%	78.13%
14/08/2003	14,928	41.21%	37.77%	70.44%	29.56%	78.26%
15/08/2003	15,026	41.25%	37.47%	70.71%	29.29%	78.18%
18/08/2003	14,721	41.28%	37.36%	70.81%	29.19%	78.12%
19/08/2003	14,755	41.01%	37.37%	70.80%	29.20%	78.14%
20/08/2003	14,561	41.06%	37.38%	70.78%	29.22%	78.16%
21/08/2003	14,980	40.60%	37.27%	70.91%	29.09%	78.05%
22/08/2003	15,200	40.82%	37.28%	70.89%	29.11%	78.07%
25/08/2003	14,920	40.02%	37.06%	71.12%	28.88%	77.92%
26/08/2003	14,839	39.96%	37.17%	71.01%	28.99%	77.98%
27/08/2003	14,709	39.87%	36.77%	71.42%	28.58%	77.73%
28/08/2003	14,542	39.79%	36.74%	71.45%	28.55%	77.71%
29/08/2003	14,687	39.91%	36.69%	71.49%	28.51%	77.69%
01/09/2003	14,746	39.66%	36.64%	71.53%	28.47%	77.68%
02/09/2003	14,736	39.68%	36.70%	71.48%	28.52%	77.73%
03/09/2003	14,819	39.57%	36.56%	71.60%	28.40%	77.66%
04/09/2003	14,768	39.43%	36.55%	71.59%	28.41%	77.71%
05/09/2003	14,770	39.55%	36.48%	71.65%	28.35%	77.71%
08/09/2003	14,730	38.86%	36.39%	71.72%	28.28%	77.70%
09/09/2003	15,252	38.49%	36.44%	71.66%	28.34%	77.77%

10/09/2003	15,770	38.26%	36.10%	72.02%	27.98%	77.51%
11/09/2003	15,985	38.08%	35.92%	72.21%	27.79%	77.37%
12/09/2003	16,219	37.84%	35.81%	72.33%	27.67%	77.27%
15/09/2003	16,105	37.25%	35.71%	72.42%	27.58%	77.22%
16/09/2003	16,569	36.30%	35.61%	72.55%	27.45%	77.09%
17/09/2003	16,492	36.33%	35.32%	72.86%	27.14%	76.85%
18/09/2003	17,148	36.30%	34.88%	73.37%	26.63%	76.36%
19/09/2003	17,494	35.96%	34.90%	73.35%	26.65%	76.36%
22/09/2003	17,725	36.21%	34.89%	73.37%	26.63%	76.34%
23/09/2003	17,975	35.84%	34.70%	73.55%	26.45%	76.22%
24/09/2003	17,657	35.84%	34.84%	73.41%	26.59%	76.31%
25/09/2003	17,843	35.53%	34.64%	73.61%	26.39%	76.16%
26/09/2003	17,601	35.92%	34.65%	73.61%	26.39%	76.16%
29/09/2003	16,984	36.20%	34.53%	73.79%	26.21%	75.93%
30/09/2003	16,736	36.10%	34.72%	73.57%	26.43%	76.13%
01/10/2003	17,287	35.84%	34.88%	73.42%	26.58%	76.20%
02/10/2003	17,847	34.97%	34.85%	73.48%	26.52%	76.12%
03/10/2003	18,331	34.06%	34.73%	73.61%	26.39%	75.97%
06/10/2003	20,422	34.15%	34.63%	74.09%	25.91%	74.82%
07/10/2003	20,054	32.84%	34.19%	74.59%	25.41%	74.31%
08/10/2003	19,554	32.39%	34.21%	74.55%	25.45%	74.40%
09/10/2003	19,190	32.10%	33.58%	75.28%	24.72%	73.63%
10/10/2003	19,873	32.06%	33.39%	75.53%	24.47%	73.28%
13/10/2003	19,274	30.84%	33.24%	75.70%	24.30%	73.10%
14/10/2003	19,362	30.83%	33.20%	75.73%	24.27%	73.13%
15/10/2003	19,873	30.64%	32.61%	76.43%	23.57%	72.28%
16/10/2003	20,180	30.71%	32.52%	76.44%	23.56%	72.45%
17/10/2003	19,898	30.77%	32.43%	76.55%	23.45%	72.32%
20/10/2003	19,895	30.65%	32.46%	76.50%	23.50%	72.38%
21/10/2003	20,156	30.56%	32.49%	76.47%	23.53%	72.43%
22/10/2003	19,717	30.41%	32.43%	76.54%	23.46%	72.34%
23/10/2003	19,085	31.32%	32.36%	76.59%	23.41%	72.33%
24/10/2003	19,138	32.08%	32.29%	76.68%	23.32%	72.23%
27/10/2003	18,733	31.56%	32.75%	76.15%	23.85%	72.83%
28/10/2003	18,910	31.82%	32.71%	76.15%	23.85%	72.90%
30/10/2003	19,919	31.06%	33.16%	75.71%	24.29%	73.25%
31/10/2003	20,432	30.82%	32.92%	76.01%	23.99%	72.88%
03/11/2003	21,282	31.88%	32.98%	75.86%	24.14%	73.20%

04/11/2003	21,175	31.91%	32.30%	76.30%	23.70%	73.37%
05/11/2003	21,374	31.68%	32.18%	76.44%	23.56%	73.21%
06/11/2003	20,197	31.21%	32.32%	75.83%	24.17%	74.78%
07/11/2003	20,407	31.60%	32.33%	75.81%	24.19%	74.82%
10/11/2003	20,144	31.02%	32.18%	75.94%	24.06%	74.76%
11/11/2003	19,673	30.81%	31.87%	76.22%	23.78%	74.63%
12/11/2003	20,451	30.81%	32.10%	75.99%	24.01%	74.82%
13/11/2003	20,857	30.84%	31.76%	76.32%	23.68%	74.54%
14/11/2003	20,871	30.80%	31.58%	76.44%	23.56%	74.59%
17/11/2003	20,319	30.80%	31.58%	76.44%	23.56%	74.59%
18/11/2003	20,404	31.06%	31.51%	76.43%	23.57%	74.81%
19/11/2003	20,407	30.91%	31.48%	76.45%	23.55%	74.79%
20/11/2003	18,765	30.78%	31.63%	76.45%	23.55%	74.45%
01/12/2003	20,732	30.77%	31.93%	76.47%	23.53%	73.72%
02/12/2003	21,032	30.80%	31.89%	76.47%	23.53%	73.79%
03/12/2003	21,237	30.72%	31.89%	76.45%	23.55%	73.83%
04/12/2003	21,042	30.60%	31.85%	76.50%	23.50%	73.79%
05/12/2003	21,357	29.96%	31.79%	76.57%	23.43%	73.70%
08/12/2003	21,955	29.74%	31.46%	76.95%	23.05%	73.27%
09/12/2003	21,893	29.35%	31.35%	77.08%	22.92%	73.11%
10/12/2003	21,582	29.80%	31.16%	77.31%	22.69%	72.82%
11/12/2003	21,513	29.76%	31.39%	77.04%	22.96%	73.15%
12/12/2003	22,090	29.55%	31.32%	77.06%	22.94%	73.22%
15/12/2003	22,727	29.04%	31.22%	77.19%	22.81%	73.06%
16/12/2003	22,413	28.83%	30.94%	77.50%	22.50%	72.72%
17/12/2003	22,440	28.06%	30.81%	77.62%	22.38%	72.65%
18/12/2003	23,179	28.39%	30.45%	78.09%	21.91%	71.97%
19/12/2003	23,817	28.30%	30.54%	77.89%	22.11%	72.40%
22/12/2003	24,017	27.96%	30.33%	77.94%	22.06%	72.73%
23/12/2003	23,784	27.64%	30.16%	78.15%	21.85%	72.45%
24/12/2003	23,783	27.61%	29.94%	78.35%	21.65%	72.31%
25/12/2003	22,950	27.50%	29.97%	78.37%	21.63%	72.19%
26/12/2003	23,445	27.43%	29.83%	78.43%	21.57%	72.30%
29/12/2003	23,376	27.23%	29.78%	78.48%	21.52%	72.28%
30/12/2003	23,851	27.15%	29.64%	78.60%	21.40%	72.21%
31/12/2003	24,310	26.49%	29.53%	78.65%	21.35%	72.31%
02/01/2004	25,036	25.99%	29.55%	78.65%	21.35%	72.25%
05/01/2004	25,809	25.91%	29.23%	79.06%	20.94%	71.65%

06/01/2004	24,894	25.81%	29.03%	79.37%	20.63%	71.07%
07/01/2004	25,404	25.44%	28.98%	79.42%	20.58%	70.99%
08/01/2004	25,425	25.38%	28.92%	79.48%	20.52%	70.94%
09/01/2004	26,185	25.48%	28.87%	79.48%	20.52%	71.08%
12/01/2004	25,636	25.48%	28.56%	79.72%	20.28%	71.00%
13/01/2004	25,467	25.40%	28.48%	79.76%	20.24%	71.07%
14/01/2004	24,562	25.52%	28.58%	79.70%	20.30%	71.04%
15/01/2004	24,720	25.58%	28.58%	79.70%	20.30%	71.04%
16/01/2004	23,776	25.48%	28.59%	79.75%	20.25%	70.85%
19/01/2004	23,054	25.70%	28.65%	79.67%	20.33%	70.97%
20/01/2004	24,569	25.76%	28.81%	79.63%	20.37%	70.71%
21/01/2004	24,619	25.54%	28.75%	79.69%	20.31%	70.64%
22/01/2004	24,077	25.54%	28.88%	79.55%	20.45%	70.81%
26/01/2004	23,851	25.39%	28.78%	79.65%	20.35%	70.68%
27/01/2004	23,241	25.76%	28.81%	79.66%	20.34%	70.61%
28/01/2004	23,250	26.05%	28.73%	79.75%	20.25%	70.47%
29/01/2004	22,394	25.45%	28.94%	79.52%	20.48%	70.77%
30/01/2004	22,371	25.40%	29.08%	79.34%	20.66%	71.05%
05/02/2004	22,072	26.29%	28.79%	79.71%	20.29%	70.47%
06/02/2004	21,949	26.15%	28.75%	79.74%	20.26%	70.45%
09/02/2004	22,973	25.48%	29.26%	79.19%	20.81%	71.14%
10/02/2004	22,680	25.44%	29.26%	79.19%	20.81%	71.14%
11/02/2004	23,525	25.33%	29.23%	79.27%	20.73%	70.92%
12/02/2004	24,787	25.21%	28.98%	79.69%	20.31%	70.08%
13/02/2004	24,965	25.22%	28.89%	79.72%	20.28%	70.20%
16/02/2004	25,419	25.21%	28.84%	79.79%	20.21%	70.07%
17/02/2004	24,947	25.09%	28.79%	79.86%	20.14%	69.95%
18/02/2004	25,589	25.17%	28.80%	79.86%	20.14%	69.91%
19/02/2004	24,295	25.11%	28.88%	79.86%	20.14%	69.72%
20/02/2004	24,297	25.17%	28.82%	79.86%	20.14%	69.88%
23/02/2004	23,757	25.04%	28.83%	79.86%	20.14%	69.86%
24/02/2004	24,007	25.01%	28.83%	79.86%	20.14%	69.84%
25/02/2004	24,253	24.69%	28.77%	79.95%	20.05%	69.71%
26/02/2004	24,306	24.73%	28.77%	79.89%	20.11%	69.91%
27/02/2004	24,473	24.81%	28.73%	79.93%	20.07%	69.86%
01/03/2004	24,327	24.64%	28.76%	79.89%	20.11%	69.92%
02/03/2004	25,100	24.58%	28.72%	79.97%	20.03%	69.73%
03/03/2004	24,804	24.50%	28.71%	80.00%	20.00%	69.68%

04/03/2004	24,600	24.32%	27.97%	80.20%	19.80%	70.80%
05/03/2004	24,802	24.54%	27.92%	80.18%	19.82%	71.00%
08/03/2004	25,253	24.31%	27.97%	80.12%	19.88%	71.09%
09/03/2004	25,218	24.19%	27.88%	80.23%	19.77%	70.92%
10/03/2004	25,623	24.11%	27.85%	80.27%	19.73%	70.84%
11/03/2004	25,029	24.23%	27.82%	80.32%	19.68%	70.73%
12/03/2004	24,985	24.14%	27.73%	80.44%	19.56%	70.55%
15/03/2004	25,187	24.11%	27.84%	80.29%	19.71%	70.80%
16/03/2004	24,910	24.14%	27.72%	80.45%	19.55%	70.54%
17/03/2004	24,863	24.11%	27.66%	80.52%	19.48%	70.43%
18/03/2004	25,324	23.96%	27.20%	80.57%	19.43%	71.42%
19/03/2004	25,903	23.31%	26.80%	80.50%	19.50%	72.79%
22/03/2004	26,044	23.21%	26.60%	80.55%	19.45%	73.12%
23/03/2004	25,968	23.20%	26.53%	80.57%	19.43%	73.22%
24/03/2004	26,181	23.06%	26.52%	80.55%	19.45%	73.32%
25/03/2004	26,309	23.09%	26.38%	80.57%	19.43%	73.66%
26/03/2004	26,822	23.06%	26.35%	80.57%	19.43%	73.74%
29/03/2004	26,970	23.07%	26.25%	80.67%	19.33%	73.64%
30/03/2004	25,680	23.09%	25.99%	81.10%	18.90%	72.72%
31/03/2004	25,899	23.36%	25.94%	81.16%	18.84%	72.62%
01/04/2004	26,024	23.80%	25.92%	81.17%	18.83%	72.66%
02/04/2004	26,212	24.00%	25.81%	81.26%	18.74%	72.59%
05/04/2004	25,953	23.74%	25.82%	81.26%	18.74%	72.57%
06/04/2004	25,814	23.47%	25.78%	81.26%	18.74%	72.69%
07/04/2004	25,467	23.42%	25.77%	81.24%	18.76%	72.77%
08/04/2004	24,670	23.77%	25.77%	81.26%	18.74%	72.70%
09/04/2004	24,742	23.87%	25.75%	81.25%	18.75%	72.80%
12/04/2004	24,401	23.77%	25.73%	81.24%	18.76%	72.90%
13/04/2004	24,154	23.90%	25.84%	81.07%	18.93%	73.27%
14/04/2004	23,559	24.14%	26.11%	80.78%	19.22%	73.64%
15/04/2004	23,640	25.14%	26.12%	80.65%	19.35%	74.10%
16/04/2004	24,371	25.02%	26.01%	80.81%	19.19%	73.76%
19/04/2004	25,323	24.63%	25.91%	80.99%	19.01%	73.37%
20/04/2004	24,749	25.76%	25.90%	81.02%	18.98%	73.27%
21/04/2004	24,342	25.99%	26.10%	80.79%	19.21%	73.59%
22/04/2004	24,584	26.14%	26.14%	80.73%	19.27%	73.72%
26/04/2004	23,400	27.13%	26.18%	80.79%	19.21%	73.36%
27/04/2004	22,879	28.53%	26.24%	80.71%	19.29%	73.52%

28/04/2004	22,912	30.31%	26.35%	80.55%	19.45%	73.80%
29/04/2004	22,230	28.75%	26.92%	79.91%	20.09%	74.60%
30/04/2004	22,584	29.01%	26.87%	79.99%	20.01%	74.49%
03/05/2004	22,257	28.93%	26.67%	80.23%	19.77%	74.12%
04/05/2004	23,052	28.75%	27.31%	79.52%	20.48%	74.99%
05/05/2004	23,037	29.54%	27.43%	79.37%	20.63%	75.21%
06/05/2004	22,141	29.79%	27.56%	79.28%	20.72%	75.20%
07/05/2004	21,365	29.70%	28.13%	78.66%	21.34%	75.86%
10/05/2004	21,130	29.49%	28.86%	77.80%	22.20%	76.91%
11/05/2004	21,569	29.43%	29.83%	76.74%	23.26%	77.96%
12/05/2004	21,637	28.84%	28.98%	77.67%	22.33%	77.06%
13/05/2004	20,968	29.09%	29.15%	77.52%	22.48%	77.12%
14/05/2004	20,786	28.76%	29.11%	77.56%	22.44%	77.07%
17/05/2004	19,975	28.66%	29.06%	77.67%	22.33%	76.85%
18/05/2004	20,284	28.69%	29.48%	77.20%	22.80%	77.35%
20/05/2004	20,541	28.60%	29.62%	77.05%	22.95%	77.50%
21/05/2004	20,932	28.76%	29.57%	77.10%	22.90%	77.43%
24/05/2004	21,623	28.60%	29.49%	77.22%	22.78%	77.23%
25/05/2004	21,100	28.67%	29.47%	77.26%	22.74%	77.15%
26/05/2004	21,684	28.60%	29.14%	77.61%	22.39%	76.83%
27/05/2004	21,601	28.44%	29.28%	77.46%	22.54%	76.98%
28/05/2004	21,811	28.49%	29.10%	77.66%	22.34%	76.77%
31/05/2004	21,509	27.63%	29.01%	77.73%	22.27%	76.78%
01/06/2004	21,121	27.64%	29.04%	77.71%	22.29%	76.77%
02/06/2004	21,268	27.83%	28.99%	77.76%	22.24%	76.71%
03/06/2004	21,492	27.99%	29.07%	77.67%	22.33%	76.84%
04/06/2004	22,475	28.13%	29.12%	77.67%	22.33%	76.71%
07/06/2004	22,880	28.17%	29.10%	77.67%	22.33%	76.75%
08/06/2004	22,260	27.84%	29.13%	77.67%	22.33%	76.67%
09/06/2004	22,302	27.86%	29.12%	77.67%	22.33%	76.69%
10/06/2004	22,569	28.03%	29.12%	77.67%	22.33%	76.70%
11/06/2004	22,400	27.94%	29.11%	77.67%	22.33%	76.74%
14/06/2004	21,669	27.91%	29.15%	77.67%	22.33%	76.63%
15/06/2004	21,931	27.91%	29.14%	77.67%	22.33%	76.64%
16/06/2004	21,764	27.94%	29.13%	77.67%	22.33%	76.66%
17/06/2004	21,534	28.19%	29.10%	77.67%	22.33%	76.74%
18/06/2004	21,635	27.91%	29.02%	77.76%	22.24%	76.64%
21/06/2004	21,381	28.05%	29.02%	77.76%	22.24%	76.63%

22/06/2004	21,335	28.12%	29.00%	77.76%	22.24%	76.68%
23/06/2004	21,396	28.05%	29.00%	77.76%	22.24%	76.69%
24/06/2004	21,491	28.01%	29.00%	77.76%	22.24%	76.70%
25/06/2004	22,126	28.00%	29.02%	77.76%	22.24%	76.63%
28/06/2004	22,629	27.86%	29.04%	77.76%	22.24%	76.59%
29/06/2004	22,681	27.60%	29.03%	77.76%	22.24%	76.62%
30/06/2004	23,012	27.57%	29.07%	77.72%	22.28%	76.66%
01/07/2004	23,465	27.50%	29.04%	77.76%	22.24%	76.59%
02/07/2004	23,635	26.92%	28.95%	77.86%	22.14%	76.50%
05/07/2004	23,820	26.41%	28.97%	77.83%	22.17%	76.53%
06/07/2004	23,385	26.18%	28.52%	78.35%	21.65%	75.90%
07/07/2004	23,469	26.12%	28.51%	78.34%	21.66%	75.97%
08/07/2004	23,121	26.40%	28.61%	78.23%	21.77%	76.10%
09/07/2004	23,484	26.39%	28.68%	78.13%	21.87%	76.23%
12/07/2004	23,559	26.40%	28.75%	78.05%	21.95%	76.37%
13/07/2004	23,696	26.34%	28.75%	78.05%	21.95%	76.37%
14/07/2004	23,908	26.40%	28.77%	78.02%	21.98%	76.39%
15/07/2004	24,332	26.35%	28.59%	78.22%	21.78%	76.17%
16/07/2004	24,593	26.38%	28.58%	78.21%	21.79%	76.24%
19/07/2004	24,264	26.43%	28.67%	78.11%	21.89%	76.35%
20/07/2004	24,163	26.46%	28.63%	78.16%	21.84%	76.29%
21/07/2004	23,960	26.40%	28.61%	78.18%	21.82%	76.27%
22/07/2004	23,805	24.75%	28.61%	78.18%	21.82%	76.27%
23/07/2004	24,219	24.98%	28.59%	78.18%	21.82%	76.33%
26/07/2004	23,865	24.97%	28.59%	78.18%	21.82%	76.32%
27/07/2004	24,052	24.94%	28.61%	78.16%	21.84%	76.34%
28/07/2004	24,379	25.10%	28.74%	78.01%	21.99%	76.50%
29/07/2004	24,475	25.06%	28.60%	78.18%	21.82%	76.31%
30/07/2004	24,884	25.18%	28.60%	78.18%	21.82%	76.31%
02/08/2004	25,323	25.23%	28.68%	78.09%	21.91%	76.39%
03/08/2004	24,915	26.33%	28.72%	78.05%	21.95%	76.42%
04/08/2004	24,395	27.14%	28.74%	78.05%	21.95%	76.37%
05/08/2004	24,790	26.52%	28.63%	78.09%	21.91%	76.52%
06/08/2004	24,563	26.13%	28.57%	78.12%	21.88%	76.61%
09/08/2004	24,635	25.84%	28.54%	78.13%	21.88%	76.64%
10/08/2004	24,828	25.60%	28.45%	78.21%	21.79%	76.58%
11/08/2004	24,147	25.55%	28.34%	78.37%	21.63%	76.32%
12/08/2004	23,934	25.51%	28.34%	78.37%	21.63%	76.34%

13/08/2004	24,010	25.56%	28.32%	78.39%	21.61%	76.32%
16/08/2004	24,043	25.61%	28.28%	78.43%	21.57%	76.27%
17/08/2004	24,951	25.69%	28.01%	78.79%	21.21%	75.73%
18/08/2004	24,702	25.35%	27.74%	79.10%	20.90%	75.33%
19/08/2004	24,574	25.33%	27.60%	79.25%	20.75%	75.18%
20/08/2004	24,707	25.42%	27.57%	79.29%	20.71%	75.13%
23/08/2004	24,828	24.42%	27.71%	79.11%	20.89%	75.38%
24/08/2004	25,182	24.26%	27.68%	79.12%	20.88%	75.43%
25/08/2004	25,004	24.20%	27.68%	79.11%	20.89%	75.44%
26/08/2004	25,006	24.13%	27.64%	79.15%	20.85%	75.44%
27/08/2004	25,403	24.13%	27.67%	79.11%	20.89%	75.47%
31/08/2004	25,923	23.78%	27.68%	79.11%	20.89%	75.45%
01/09/2004	26,325	23.45%	27.65%	79.15%	20.85%	75.42%
02/09/2004	26,341	23.50%	27.66%	79.13%	20.87%	75.44%
03/09/2004	26,645	23.64%	27.69%	79.10%	20.90%	75.47%
06/09/2004	26,731	23.41%	27.71%	79.08%	20.92%	75.50%
07/09/2004	27,070	23.55%	27.68%	79.11%	20.89%	75.45%
08/09/2004	27,598	23.49%	26.81%	80.16%	19.84%	74.01%
09/09/2004	27,483	23.49%	26.93%	80.02%	19.98%	74.21%
10/09/2004	26,923	23.51%	26.94%	80.02%	19.98%	74.15%
13/09/2004	26,961	23.61%	26.89%	80.04%	19.96%	74.24%
14/09/2004	27,819	23.55%	26.97%	79.94%	20.06%	74.40%
15/09/2004	27,671	23.65%	26.95%	79.96%	20.04%	74.37%
16/09/2004	27,773	23.94%	27.00%	79.89%	20.11%	74.48%
17/09/2004	26,607	24.04%	27.10%	79.86%	20.14%	74.34%
20/09/2004	26,031	24.14%	27.69%	79.16%	20.84%	75.28%
21/09/2004	27,140	24.11%	28.18%	78.65%	21.35%	75.75%
22/09/2004	27,372	24.23%	27.79%	79.04%	20.96%	75.41%
23/09/2004	28,555	24.23%	27.64%	79.28%	20.72%	74.96%
24/09/2004	28,546	24.20%	27.48%	79.47%	20.53%	74.73%
27/09/2004	28,269	24.19%	27.48%	79.47%	20.53%	74.73%
28/09/2004	28,535	24.16%	27.34%	79.62%	20.38%	74.56%
29/09/2004	28,390	24.19%	27.31%	79.65%	20.35%	74.52%
30/09/2004	28,026	24.16%	27.29%	79.67%	20.33%	74.49%
01/10/2004	27,740	24.16%	27.27%	79.64%	20.36%	74.66%
04/10/2004	28,124	24.57%	27.29%	79.61%	20.39%	74.71%
05/10/2004	27,665	24.73%	27.31%	79.56%	20.44%	74.85%
06/10/2004	28,584	24.63%	27.13%	79.78%	20.22%	74.55%

07/10/2004	28,767	24.36%	27.09%	79.79%	20.21%	74.59%
08/10/2004	29,418	24.19%	26.68%	79.73%	20.27%	75.95%
11/10/2004	29,157	23.99%	26.67%	79.73%	20.27%	75.98%
12/10/2004	28,493	24.20%	26.67%	79.73%	20.27%	75.99%
13/10/2004	28,952	24.34%	26.66%	79.73%	20.27%	76.01%
14/10/2004	28,490	24.66%	26.63%	79.73%	20.27%	76.10%
15/10/2004	28,707	24.25%	26.04%	80.37%	19.63%	75.36%
18/10/2004	28,485	24.25%	25.96%	80.47%	19.53%	75.21%
19/10/2004	28,803	24.15%	25.91%	80.52%	19.48%	75.21%
20/10/2004	28,365	23.52%	25.87%	80.56%	19.44%	75.13%
21/10/2004	28,321	23.71%	25.86%	80.56%	19.44%	75.16%
22/10/2004	28,391	22.19%	25.67%	80.79%	19.21%	74.84%
25/10/2004	27,967	22.14%	25.50%	81.00%	19.00%	74.51%
26/10/2004	28,282	22.06%	25.50%	80.97%	19.03%	74.61%
27/10/2004	28,848	22.19%	25.55%	80.88%	19.12%	74.84%
28/10/2004	29,321	22.00%	25.43%	81.03%	18.97%	74.59%
01/11/2004	29,184	22.00%	25.49%	80.94%	19.06%	74.79%
02/11/2004	29,674	22.00%	25.46%	80.98%	19.02%	74.71%
03/11/2004	29,986	22.00%	25.36%	80.98%	19.02%	75.01%
04/11/2004	29,385	21.96%	25.37%	80.96%	19.04%	75.05%
05/11/2004	29,680	21.93%	25.36%	80.90%	19.10%	75.32%
08/11/2004	28,826	20.01%	25.36%	80.94%	19.06%	75.16%
09/11/2004	28,726	20.01%	25.41%	80.88%	19.12%	75.26%
10/11/2004	28,795	19.90%	25.44%	80.69%	19.31%	75.91%
11/11/2004	28,252	20.03%	25.52%	80.62%	19.38%	75.97%
12/11/2004	28,095	19.94%	25.56%	80.56%	19.44%	76.07%
17/11/2004	28,804	19.94%	25.54%	80.57%	19.43%	76.06%
18/11/2004	29,612	19.93%	25.58%	80.50%	19.50%	76.25%
19/11/2004	29,656	19.93%	25.57%	80.50%	19.50%	76.29%
22/11/2004	29,402	19.93%	25.55%	80.52%	19.48%	76.25%
23/11/2004	28,675	19.93%	25.54%	80.52%	19.48%	76.25%
24/11/2004	30,099	19.93%	25.62%	80.54%	19.46%	75.95%
25/11/2004	30,029	19.95%	25.64%	80.52%	19.48%	75.97%
26/11/2004	29,791	19.95%	25.35%	80.54%	19.46%	76.76%
29/11/2004	29,184	19.80%	24.93%	80.54%	19.46%	78.05%
30/11/2004	28,799	19.83%	25.17%	80.28%	19.72%	78.36%
01/12/2004	28,895	18.88%	25.26%	80.18%	19.82%	78.49%
02/12/2004	29,728	18.87%	25.22%	80.24%	19.76%	78.33%

03/12/2004	29,548	18.73%	25.06%	80.41%	19.59%	78.14%
06/12/2004	29,586	18.69%	24.94%	80.52%	19.48%	78.10%
07/12/2004	29,664	18.69%	24.83%	80.65%	19.35%	77.94%
08/12/2004	29,090	18.65%	24.95%	80.52%	19.48%	78.09%
09/12/2004	29,237	18.70%	25.04%	80.42%	19.58%	78.20%
10/12/2004	29,592	18.61%	25.19%	80.22%	19.78%	78.51%
13/12/2004	30,555	18.63%	24.97%	80.48%	19.52%	78.17%
14/12/2004	30,209	18.69%	24.97%	80.48%	19.52%	78.18%
15/12/2004	30,009	18.70%	24.91%	80.55%	19.45%	78.09%
16/12/2004	30,887	18.70%	24.54%	80.96%	19.04%	77.59%
17/12/2004	31,503	18.70%	24.63%	80.84%	19.16%	77.80%
20/12/2004	31,383	18.71%	23.77%	81.84%	18.16%	76.42%
21/12/2004	30,926	18.70%	23.74%	81.87%	18.13%	76.35%
22/12/2004	31,589	18.69%	23.71%	81.93%	18.07%	76.22%
23/12/2004	31,481	18.69%	23.73%	81.84%	18.16%	76.53%
24/12/2004	31,623	18.70%	23.60%	81.97%	18.03%	76.40%
27/12/2004	31,670	18.70%	23.60%	81.97%	18.03%	76.40%
28/12/2004	32,104	18.68%	23.59%	81.97%	18.03%	76.43%
29/12/2004	32,153	18.37%	23.58%	81.97%	18.03%	76.48%
03/01/2005	32,782	18.31%	23.52%	82.01%	17.99%	76.48%
04/01/2005	32,184	18.24%	23.50%	82.01%	17.99%	76.55%
05/01/2005	31,330	17.60%	23.47%	82.01%	17.99%	76.64%
06/01/2005	31,502	17.53%	23.45%	82.01%	17.99%	76.69%
07/01/2005	32,522	17.58%	23.50%	82.01%	17.99%	76.55%
10/01/2005	32,899	17.51%	23.47%	82.01%	17.99%	76.65%
11/01/2005	33,542	17.56%	23.46%	82.01%	17.99%	76.67%
12/01/2005	33,718	17.58%	22.36%	83.32%	16.68%	74.57%
13/01/2005	33,965	17.60%	22.30%	83.32%	16.68%	74.78%
14/01/2005	33,736	17.63%	22.24%	83.40%	16.60%	74.64%
17/01/2005	34,436	17.59%	22.25%	83.31%	16.69%	74.99%
18/01/2005	34,311	17.65%	22.16%	83.37%	16.63%	75.05%
19/01/2005	34,456	18.45%	21.96%	83.37%	16.63%	75.73%
24/01/2005	33,814	18.20%	21.97%	83.38%	16.62%	75.65%
25/01/2005	34,268	18.26%	21.95%	83.39%	16.61%	75.71%
26/01/2005	34,520	18.19%	21.94%	83.39%	16.61%	75.72%
27/01/2005	34,845	18.33%	21.91%	83.39%	16.61%	75.84%
28/01/2005	34,506	18.44%	21.91%	83.39%	16.61%	75.82%
31/01/2005	34,770	18.24%	21.86%	83.37%	16.63%	76.09%

01/02/2005	35,415	18.14%	21.87%	83.37%	16.63%	76.05%
02/02/2005	35,563	18.38%	21.77%	83.47%	16.53%	75.91%
03/02/2005	35,032	18.59%	21.80%	83.46%	16.54%	75.90%
04/02/2005	35,401	18.36%	21.16%	84.12%	15.88%	75.08%
07/02/2005	35,954	18.29%	21.15%	84.13%	15.87%	75.06%
08/02/2005	36,066	18.24%	21.00%	84.23%	15.77%	75.10%
09/02/2005	35,083	17.66%	20.88%	84.25%	15.75%	75.40%
10/02/2005	34,775	17.74%	20.89%	84.25%	15.75%	75.39%
11/02/2005	35,335	17.69%	20.86%	84.28%	15.72%	75.35%
14/02/2005	35,661	17.66%	20.87%	84.25%	15.75%	75.48%
15/02/2005	35,921	17.71%	20.79%	84.31%	15.69%	75.47%
16/02/2005	35,276	17.72%	20.68%	84.30%	15.70%	75.93%
17/02/2005	34,408	17.87%	20.75%	84.25%	15.75%	75.88%
18/02/2005	34,802	17.73%	20.73%	84.25%	15.75%	75.99%
21/02/2005	34,206	17.79%	20.75%	84.25%	15.75%	75.93%
22/02/2005	33,988	17.83%	20.75%	84.25%	15.75%	75.94%
23/02/2005	34,356	17.75%	20.75%	84.24%	15.76%	75.93%
24/02/2005	34,881	17.82%	20.76%	84.25%	15.75%	75.89%
25/02/2005	35,810	17.81%	20.78%	84.25%	15.75%	75.77%
28/02/2005	36,257	17.74%	20.74%	84.25%	15.75%	75.92%
01/03/2005	35,377	18.31%	20.77%	84.25%	15.75%	75.84%
02/03/2005	34,602	18.36%	20.80%	84.25%	15.75%	75.75%
03/03/2005	35,037	18.15%	20.79%	84.26%	15.74%	75.71%
04/03/2005	35,157	18.07%	20.60%	84.48%	15.52%	75.36%
07/03/2005	35,332	18.02%	20.56%	84.53%	15.47%	75.27%
08/03/2005	35,198	18.05%	20.51%	84.57%	15.43%	75.22%
09/03/2005	35,206	18.05%	20.10%	85.03%	14.97%	74.44%
10/03/2005	34,948	17.63%	20.06%	85.09%	14.91%	74.32%
11/03/2005	34,978	17.66%	20.09%	85.05%	14.95%	74.40%
14/03/2005	34,165	17.72%	20.08%	85.10%	14.90%	74.22%
15/03/2005	33,630	17.69%	20.12%	85.07%	14.93%	74.23%
16/03/2005	32,090	17.63%	20.23%	85.05%	14.95%	73.88%
17/03/2005	31,068	17.67%	20.28%	85.03%	14.97%	73.80%
18/03/2005	32,198	17.64%	20.36%	85.02%	14.98%	73.60%
21/03/2005	31,221	17.65%	20.39%	85.04%	14.96%	73.35%
22/03/2005	31,994	17.71%	20.45%	85.00%	15.00%	73.35%
23/03/2005	31,041	17.78%	20.96%	84.42%	15.58%	74.32%
24/03/2005	31,825	17.76%	20.83%	84.60%	15.40%	73.93%

25/03/2005	32,407	17.81%	20.88%	84.56%	15.44%	73.96%
28/03/2005	31,528	17.85%	20.76%	84.61%	15.39%	74.16%
29/03/2005	31,069	17.85%	20.85%	84.51%	15.49%	74.32%
30/03/2005	31,250	17.77%	20.91%	84.43%	15.57%	74.46%
31/03/2005	32,560	17.64%	20.88%	84.57%	15.43%	73.89%
01/04/2005	32,808	17.43%	20.82%	84.65%	15.35%	73.76%
04/04/2005	32,440	17.26%	20.96%	84.48%	15.52%	74.07%
05/04/2005	32,796	17.00%	21.08%	84.32%	15.68%	74.39%
06/04/2005	33,299	16.88%	20.90%	84.49%	15.51%	74.23%
07/04/2005	32,984	16.90%	20.87%	84.54%	15.46%	74.11%
08/04/2005	32,934	16.56%	20.82%	84.58%	15.42%	74.08%
11/04/2005	32,393	16.63%	20.50%	84.99%	15.01%	73.20%
12/04/2005	32,044	16.64%	20.52%	84.94%	15.06%	73.42%
13/04/2005	32,400	16.63%	20.50%	84.97%	15.03%	73.34%
14/04/2005	31,416	16.63%	20.48%	84.99%	15.01%	73.27%
15/04/2005	30,550	16.72%	20.48%	84.96%	15.04%	73.46%
18/04/2005	29,920	16.86%	20.48%	84.95%	15.05%	73.50%
19/04/2005	31,041	16.79%	20.62%	84.84%	15.16%	73.52%
20/04/2005	31,083	16.88%	20.53%	84.94%	15.06%	73.32%
21/04/2005	31,394	16.90%	20.45%	84.90%	15.10%	73.86%
22/04/2005	31,771	16.93%	20.44%	84.87%	15.13%	74.00%
25/04/2005	31,882	16.96%	20.40%	84.92%	15.08%	73.90%
26/04/2005	31,458	16.98%	20.40%	84.87%	15.13%	74.14%
27/04/2005	30,908	16.97%	20.40%	84.88%	15.12%	74.09%
28/04/2005	30,221	16.96%	20.38%	84.93%	15.07%	73.94%
29/04/2005	30,319	16.97%	20.65%	84.52%	15.48%	74.96%
02/05/2005	31,196	16.82%	20.71%	84.49%	15.51%	74.88%
03/05/2005	31,037	16.86%	20.51%	84.64%	15.36%	74.90%
04/05/2005	31,573	16.86%	20.40%	84.70%	15.30%	75.00%
05/05/2005	32,224	16.88%	20.38%	84.73%	15.27%	74.89%
06/05/2005	32,027	16.86%	20.39%	84.71%	15.29%	75.00%
09/05/2005	31,661	16.82%	20.40%	84.71%	15.29%	74.97%
10/05/2005	31,648	16.82%	20.10%	85.01%	14.99%	74.58%
11/05/2005	31,601	16.87%	20.11%	84.99%	15.01%	74.64%
12/05/2005	32,155	16.92%	20.07%	84.95%	15.05%	75.02%
13/05/2005	32,389	16.91%	20.04%	84.97%	15.03%	75.01%
16/05/2005	31,834	16.87%	20.02%	85.02%	14.98%	74.87%
17/05/2005	31,733	16.87%	20.03%	84.98%	15.02%	74.98%

18/05/2005	32,205	16.87%	19.96%	85.01%	14.99%	75.10%
20/05/2005	32,563	16.87%	19.94%	85.00%	15.00%	75.24%
23/05/2005	31,043	16.92%	20.06%	84.96%	15.04%	74.98%
24/05/2005	30,821	16.91%	20.11%	84.91%	15.09%	75.07%
25/05/2005	30,789	16.93%	20.09%	84.92%	15.08%	75.05%
26/05/2005	30,707	16.91%	20.11%	84.88%	15.12%	75.17%
27/05/2005	31,259	16.90%	20.13%	84.86%	15.14%	75.25%
30/05/2005	31,954	16.89%	20.15%	84.85%	15.15%	75.18%
31/05/2005	32,325	16.98%	20.10%	84.91%	15.09%	75.06%
01/06/2005	32,302	16.98%	19.92%	85.01%	14.99%	75.27%
02/06/2005	33,049	16.98%	19.81%	85.16%	14.84%	74.93%
03/06/2005	33,380	16.85%	19.67%	85.28%	14.72%	74.84%
06/06/2005	32,684	16.85%	19.55%	85.47%	14.53%	74.35%
07/06/2005	32,577	16.91%	19.47%	85.56%	14.44%	74.18%
08/06/2005	32,979	16.83%	19.48%	85.54%	14.46%	74.21%
09/06/2005	32,561	16.86%	19.23%	85.79%	14.21%	73.88%
10/06/2005	32,814	16.84%	19.27%	85.74%	14.26%	74.01%
13/06/2005	32,616	16.84%	19.27%	85.73%	14.27%	74.03%
14/06/2005	33,044	16.89%	19.27%	85.74%	14.26%	74.02%
15/06/2005	33,409	16.85%	19.27%	85.74%	14.26%	74.00%
16/06/2005	33,914	16.87%	19.32%	85.68%	14.32%	74.14%
17/06/2005	33,842	16.90%	19.40%	85.57%	14.43%	74.36%
20/06/2005	34,090	16.85%	19.36%	85.62%	14.38%	74.25%
21/06/2005	34,114	16.88%	19.41%	85.56%	14.44%	74.38%
22/06/2005	34,178	16.87%	19.38%	85.54%	14.46%	74.58%
23/06/2005	34,486	16.88%	19.38%	85.52%	14.48%	74.71%
24/06/2005	34,517	16.87%	19.40%	85.50%	14.50%	74.76%
27/06/2005	33,954	16.84%	19.42%	85.48%	14.52%	74.76%
28/06/2005	34,229	16.84%	19.40%	85.49%	14.51%	74.80%
29/06/2005	34,657	16.84%	19.40%	85.50%	14.50%	74.77%
30/06/2005	34,474	16.84%	19.40%	85.50%	14.50%	74.76%
01/07/2005	35,341	16.84%	19.41%	85.50%	14.50%	74.74%
04/07/2005	35,436	16.85%	19.32%	85.60%	14.40%	74.52%
05/07/2005	34,985	16.83%	19.34%	85.57%	14.43%	74.59%
06/07/2005	35,477	16.82%	19.34%	85.57%	14.43%	74.60%
07/07/2005	35,416	16.80%	19.35%	85.56%	14.44%	74.63%
08/07/2005	35,599	16.69%	19.34%	85.58%	14.42%	74.59%
11/07/2005	35,466	16.63%	19.32%	85.60%	14.40%	74.54%

12/07/2005	35,236	16.63%	19.30%	85.60%	14.40%	74.59%
13/07/2005	35,714	16.64%	19.34%	85.56%	14.44%	74.66%
14/07/2005	36,319	16.65%	19.37%	85.53%	14.47%	74.72%
15/07/2005	36,245	16.66%	19.36%	85.53%	14.47%	74.72%
18/07/2005	36,238	16.61%	19.33%	85.57%	14.43%	74.67%
19/07/2005	36,652	16.56%	19.33%	85.57%	14.43%	74.67%
20/07/2005	36,691	16.48%	19.32%	85.57%	14.43%	74.72%
21/07/2005	37,064	16.48%	19.31%	85.56%	14.44%	74.77%
22/07/2005	37,342	16.38%	19.33%	85.53%	14.47%	74.84%
25/07/2005	37,405	16.36%	19.32%	85.53%	14.47%	74.86%
26/07/2005	36,616	16.38%	19.36%	85.52%	14.48%	74.78%
27/07/2005	37,220	16.41%	19.35%	85.53%	14.47%	74.75%
28/07/2005	37,443	16.41%	19.33%	85.54%	14.46%	74.78%
29/07/2005	37,807	16.47%	19.31%	85.55%	14.45%	74.82%
01/08/2005	37,986	16.29%	19.33%	85.49%	14.51%	75.07%
02/08/2005	37,654	16.22%	19.33%	85.49%	14.51%	75.09%
03/08/2005	37,865	16.12%	19.32%	85.49%	14.51%	75.11%
04/08/2005	38,369	16.06%	19.26%	85.58%	14.42%	74.90%
05/08/2005	38,116	16.07%	19.26%	85.58%	14.42%	74.89%
08/08/2005	38,117	15.93%	19.24%	85.54%	14.46%	75.16%
09/08/2005	37,813	15.94%	19.19%	85.60%	14.40%	75.05%
10/08/2005	37,796	15.93%	19.21%	85.57%	14.43%	75.09%
11/08/2005	37,121	15.93%	19.22%	85.59%	14.41%	74.97%
12/08/2005	35,873	15.96%	19.22%	85.59%	14.41%	74.98%
15/08/2005	35,802	15.95%	19.24%	85.55%	14.45%	75.09%
16/08/2005	35,980	15.93%	19.22%	85.58%	14.42%	75.04%
17/08/2005	35,564	15.93%	19.24%	85.57%	14.43%	75.02%
18/08/2005	35,678	15.94%	19.26%	85.54%	14.46%	75.08%
19/08/2005	36,278	15.91%	19.23%	85.58%	14.42%	74.98%
22/08/2005	36,940	15.91%	19.26%	85.56%	14.44%	74.98%
23/08/2005	37,308	15.79%	19.26%	85.57%	14.43%	74.95%
24/08/2005	37,572	15.76%	19.25%	85.56%	14.44%	75.01%
25/08/2005	38,213	15.75%	19.24%	85.56%	14.44%	75.02%
26/08/2005	38,501	15.66%	19.21%	85.59%	14.41%	75.00%
29/08/2005	38,525	15.66%	19.21%	85.59%	14.41%	75.00%
31/08/2005	39,740	15.45%	19.26%	85.59%	14.41%	74.83%
01/09/2005	41,191	15.32%	19.33%	85.59%	14.41%	74.56%
02/09/2005	40,867	15.32%	19.32%	85.59%	14.41%	74.57%

05/09/2005	41,116	15.31%	19.31%	85.58%	14.42%	74.65%
06/09/2005	41,040	15.32%	19.32%	85.58%	14.42%	74.67%
07/09/2005	40,415	15.31%	19.29%	85.59%	14.41%	74.68%
08/09/2005	40,503	15.31%	19.28%	85.60%	14.40%	74.66%
09/09/2005	41,506	15.31%	19.25%	85.62%	14.38%	74.71%
12/09/2005	42,195	15.29%	19.20%	85.70%	14.30%	74.50%
13/09/2005	42,002	15.28%	19.16%	85.74%	14.26%	74.40%
14/09/2005	42,126	15.27%	19.05%	85.74%	14.26%	74.83%
15/09/2005	42,952	15.29%	19.04%	85.74%	14.26%	74.90%
16/09/2005	42,939	15.28%	18.95%	85.73%	14.27%	75.29%
19/09/2005	42,724	15.18%	18.96%	85.72%	14.28%	75.31%
20/09/2005	43,377	15.19%	18.85%	85.75%	14.25%	75.59%
21/09/2005	43,571	15.19%	18.81%	85.80%	14.20%	75.51%
22/09/2005	42,993	15.19%	18.77%	85.85%	14.15%	75.38%
23/09/2005	42,621	15.19%	18.78%	85.85%	14.15%	75.36%
26/09/2005	43,021	15.11%	18.71%	85.93%	14.07%	75.19%
27/09/2005	42,819	15.19%	18.69%	85.94%	14.06%	75.21%
28/09/2005	42,158	15.07%	18.72%	85.93%	14.07%	75.20%
29/09/2005	42,992	15.14%	18.74%	85.90%	14.10%	75.21%
30/09/2005	42,939	15.14%	18.72%	85.91%	14.09%	75.28%
03/10/2005	44,231	15.14%	18.75%	85.86%	14.14%	75.42%
04/10/2005	45,924	14.87%	18.72%	85.99%	14.01%	74.83%
05/10/2005	44,715	14.91%	18.70%	86.04%	13.96%	74.64%
06/10/2005	42,929	14.90%	18.73%	86.12%	13.88%	74.09%
07/10/2005	42,757	14.89%	18.67%	86.16%	13.84%	74.13%
10/10/2005	42,829	14.88%	18.66%	86.15%	13.85%	74.19%
11/10/2005	43,542	14.89%	18.57%	86.26%	13.74%	73.98%
12/10/2005	42,333	14.95%	18.63%	86.25%	13.75%	73.80%
13/10/2005	40,960	14.93%	18.68%	86.26%	13.74%	73.53%
14/10/2005	40,059	14.92%	18.71%	86.26%	13.74%	73.43%
17/10/2005	40,613	14.88%	18.72%	86.24%	13.76%	73.51%
18/10/2005	40,221	14.78%	18.72%	86.25%	13.75%	73.46%
19/10/2005	39,180	14.78%	18.76%	86.26%	13.74%	73.26%
20/10/2005	40,047	14.81%	18.76%	86.26%	13.74%	73.22%
21/10/2005	40,116	14.79%	18.76%	86.25%	13.75%	73.26%
24/10/2005	40,703	14.89%	18.74%	86.27%	13.73%	73.26%
25/10/2005	40,465	14.91%	18.73%	86.27%	13.73%	73.30%
26/10/2005	40,170	14.85%	18.66%	86.36%	13.64%	73.08%

27/10/2005	39,876	14.84%	18.63%	86.39%	13.61%	73.06%
28/10/2005	39,516	14.84%	18.63%	86.39%	13.61%	73.05%
31/10/2005	40,789	14.84%	18.66%	86.39%	13.61%	72.93%
01/11/2005	41,914	14.83%	18.64%	86.46%	13.54%	72.63%
02/11/2005	42,429	14.82%	18.59%	86.46%	13.54%	72.81%
07/11/2005	43,336	14.79%	18.61%	86.46%	13.54%	72.73%
08/11/2005	43,170	14.78%	18.49%	86.62%	13.38%	72.35%
09/11/2005	43,325	14.79%	18.40%	86.71%	13.29%	72.22%
10/11/2005	44,489	14.76%	18.43%	86.71%	13.29%	72.09%
11/11/2005	43,634	14.74%	18.42%	86.72%	13.28%	72.09%
14/11/2005	43,683	14.75%	18.38%	86.71%	13.29%	72.27%
15/11/2005	43,863	14.75%	18.37%	86.72%	13.28%	72.25%
16/11/2005	44,642	14.74%	18.38%	86.72%	13.28%	72.21%
17/11/2005	45,003	14.76%	18.34%	86.72%	13.28%	72.37%
18/11/2005	45,282	14.76%	18.20%	86.74%	13.26%	72.88%
21/11/2005	45,698	14.78%	18.19%	86.75%	13.25%	72.85%
22/11/2005	45,105	14.74%	18.20%	86.75%	13.25%	72.80%
23/11/2005	46,335	14.74%	18.22%	86.73%	13.27%	72.81%
24/11/2005	47,444	14.74%	18.23%	86.74%	13.26%	72.73%
25/11/2005	47,164	14.75%	18.17%	86.82%	13.18%	72.53%
28/11/2005	46,931	14.75%	18.13%	86.82%	13.18%	72.70%
29/11/2005	48,132	14.74%	18.17%	86.81%	13.19%	72.59%
30/11/2005	48,931	14.76%	18.18%	86.81%	13.19%	72.54%
01/12/2005	49,088	14.79%	18.18%	86.81%	13.19%	72.54%
02/12/2005	49,397	14.77%	18.10%	86.88%	13.12%	72.50%
05/12/2005	50,121	14.77%	18.16%	86.81%	13.19%	72.61%
06/12/2005	49,700	14.73%	18.09%	86.90%	13.10%	72.39%
07/12/2005	48,990	14.66%	18.09%	86.85%	13.15%	72.67%
08/12/2005	49,211	14.66%	18.08%	86.85%	13.15%	72.72%
09/12/2005	47,715	14.65%	18.14%	86.85%	13.15%	72.48%
12/12/2005	48,708	14.67%	17.96%	87.05%	12.95%	72.08%
13/12/2005	48,007	14.66%	17.98%	87.03%	12.97%	72.16%
14/12/2005	48,194	14.63%	17.97%	87.04%	12.96%	72.15%
15/12/2005	47,891	14.66%	17.95%	87.04%	12.96%	72.18%
16/12/2005	47,956	14.62%	17.93%	87.05%	12.95%	72.26%
19/12/2005	48,200	14.64%	17.93%	87.04%	12.96%	72.28%
20/12/2005	47,944	14.63%	17.97%	87.00%	13.00%	72.38%
21/12/2005	48,626	14.55%	17.96%	87.01%	12.99%	72.31%

22/12/2005	48,826	14.54%	17.95%	87.02%	12.98%	72.31%
23/12/2005	49,526	14.55%	17.94%	87.04%	12.96%	72.22%
26/12/2005	49,777	14.56%	17.86%	87.12%	12.88%	72.10%
27/12/2005	49,568	14.53%	17.84%	87.12%	12.88%	72.19%
28/12/2005	49,801	14.54%	17.80%	87.10%	12.90%	72.43%
29/12/2005	50,621	14.53%	17.81%	87.11%	12.89%	72.36%
30/12/2005	50,468	14.53%	17.81%	87.04%	12.96%	72.76%
02/01/2006	50,551	14.53%	17.81%	87.03%	12.97%	72.83%
03/01/2006	51,838	14.43%	17.80%	87.07%	12.93%	72.66%
04/01/2006	52,836	14.44%	17.81%	87.07%	12.93%	72.58%
05/01/2006	53,248	14.44%	17.81%	87.08%	12.92%	72.56%
06/01/2006	53,520	14.42%	17.80%	87.08%	12.92%	72.58%
16/01/2006	56,254	14.41%	17.93%	87.08%	12.92%	72.06%
17/01/2006	56,986	14.42%	17.92%	87.09%	12.91%	72.02%
18/01/2006	55,060	14.44%	17.99%	87.11%	12.89%	71.65%
19/01/2006	56,433	14.36%	17.99%	87.12%	12.88%	71.61%
20/01/2006	57,532	14.34%	18.00%	87.12%	12.88%	71.58%
23/01/2006	56,592	14.33%	18.00%	87.14%	12.86%	71.45%
24/01/2006	57,278	14.34%	18.00%	87.15%	12.85%	71.40%
25/01/2006	58,984	14.34%	18.04%	87.15%	12.85%	71.27%
26/01/2006	58,941	14.32%	18.04%	87.15%	12.85%	71.27%
27/01/2006	58,296	14.32%	18.03%	87.15%	12.85%	71.28%
30/01/2006	57,598	14.25%	18.05%	87.14%	12.86%	71.27%
31/01/2006	56,989	14.26%	18.04%	87.14%	12.86%	71.30%
01/02/2006	57,896	14.22%	18.06%	87.12%	12.88%	71.30%
02/02/2006	57,228	14.22%	18.04%	87.15%	12.85%	71.24%
03/02/2006	56,377	14.19%	18.05%	87.15%	12.85%	71.17%
06/02/2006	57,267	14.22%	18.01%	87.15%	12.85%	71.33%
07/02/2006	56,941	14.22%	18.01%	87.15%	12.85%	71.36%
08/02/2006	55,865	14.23%	18.03%	87.15%	12.85%	71.30%
09/02/2006	56,114	14.22%	18.02%	87.15%	12.85%	71.30%
10/02/2006	57,176	14.21%	18.05%	87.14%	12.86%	71.27%
13/02/2006	56,097	14.21%	18.07%	87.12%	12.88%	71.31%
14/02/2006	55,475	14.21%	18.02%	87.13%	12.87%	71.40%
15/02/2006	55,953	14.21%	18.02%	87.13%	12.87%	71.41%
16/02/2006	58,108	14.20%	18.05%	87.16%	12.84%	71.11%
17/02/2006	59,333	14.18%	18.07%	87.16%	12.84%	71.04%
20/02/2006	59,918	14.14%	18.03%	87.21%	12.79%	70.92%

21/02/2006	59,813	14.04%	18.02%	87.22%	12.78%	70.94%
22/02/2006	59,080	14.09%	17.99%	87.22%	12.78%	71.02%
23/02/2006	59,293	14.08%	17.99%	87.21%	12.79%	71.08%
24/02/2006	59,560	14.08%	17.95%	87.21%	12.79%	71.23%
27/02/2006	60,772	14.12%	17.92%	87.24%	12.76%	71.24%
28/02/2006	59,676	14.17%	17.95%	87.21%	12.79%	71.22%
01/03/2006	60,245	14.19%	17.93%	87.24%	12.76%	71.14%
02/03/2006	59,276	14.20%	17.96%	87.23%	12.77%	71.09%
03/03/2006	58,480	14.27%	17.97%	87.24%	12.76%	71.02%
06/03/2006	58,134	14.32%	17.93%	87.30%	12.70%	70.85%
07/03/2006	55,529	14.38%	18.05%	87.31%	12.69%	70.33%
08/03/2006	53,554	14.53%	18.14%	87.30%	12.70%	70.02%
09/03/2006	54,191	14.65%	18.11%	87.29%	12.71%	70.16%
10/03/2006	53,772	14.71%	18.08%	87.31%	12.69%	70.15%
13/03/2006	56,254	14.80%	18.06%	87.31%	12.69%	70.26%
14/03/2006	54,327	14.87%	18.07%	87.31%	12.69%	70.20%
15/03/2006	54,808	15.10%	18.00%	87.31%	12.69%	70.47%
16/03/2006	55,888	15.09%	17.96%	87.31%	12.69%	70.66%
17/03/2006	56,721	15.22%	17.88%	87.39%	12.61%	70.54%
20/03/2006	56,266	15.66%	17.83%	87.38%	12.62%	70.78%
21/03/2006	56,303	15.85%	17.80%	87.38%	12.62%	70.90%
22/03/2006	56,073	16.83%	17.77%	87.40%	12.60%	70.91%
23/03/2006	56,225	16.92%	17.71%	87.40%	12.60%	71.11%
24/03/2006	54,454	18.04%	17.77%	87.40%	12.60%	70.92%
27/03/2006	53,709	18.28%	17.80%	87.38%	12.62%	70.90%
28/03/2006	52,448	18.33%	17.69%	87.45%	12.55%	70.95%
29/03/2006	53,492	18.72%	17.70%	87.46%	12.54%	70.85%
30/03/2006	54,094	18.71%	17.69%	87.46%	12.54%	70.86%
31/03/2006	54,067	18.72%	17.69%	87.46%	12.54%	70.90%
03/04/2006	55,686	18.75%	17.73%	87.46%	12.54%	70.74%
04/04/2006	55,777	19.15%	17.71%	87.47%	12.53%	70.74%
05/04/2006	55,713	19.73%	17.71%	87.47%	12.53%	70.74%
06/04/2006	55,245	19.99%	17.65%	87.53%	12.47%	70.65%
07/04/2006	55,986	20.07%	17.66%	87.52%	12.48%	70.69%
10/04/2006	54,409	20.12%	17.69%	87.55%	12.45%	70.40%
11/04/2006	54,018	20.16%	17.63%	87.55%	12.45%	70.64%
12/04/2006	53,482	20.30%	17.56%	87.57%	12.43%	70.77%
13/04/2006	52,725	20.96%	17.56%	87.55%	12.45%	70.89%

14/04/2006	53,088	21.89%	17.49%	87.55%	12.45%	71.20%
17/04/2006	52,631	24.28%	17.50%	87.55%	12.45%	71.17%
18/04/2006	54,018	26.44%	17.53%	87.55%	12.45%	71.03%
19/04/2006	55,229	26.30%	17.54%	87.55%	12.45%	70.94%
20/04/2006	55,381	25.22%	17.54%	87.55%	12.45%	70.94%
21/04/2006	57,036	23.06%	17.57%	87.56%	12.44%	70.80%
24/04/2006	57,294	21.98%	17.55%	87.56%	12.44%	70.91%
25/04/2006	57,396	21.55%	17.50%	87.57%	12.43%	71.04%
26/04/2006	56,530	22.13%	17.51%	87.58%	12.42%	70.93%
27/04/2006	55,200	22.12%	17.49%	87.61%	12.39%	70.85%
28/04/2006	55,191	21.83%	17.43%	87.69%	12.31%	70.66%
01/05/2006	55,505	21.74%	17.44%	87.65%	12.35%	70.81%
02/05/2006	56,028	20.90%	17.42%	87.66%	12.34%	70.86%
03/05/2006	56,276	20.86%	17.42%	87.66%	12.34%	70.88%
04/05/2006	55,567	20.86%	17.44%	87.63%	12.37%	70.94%
05/05/2006	55,320	20.85%	17.47%	87.59%	12.41%	71.03%
08/05/2006	56,009	20.89%	17.49%	87.58%	12.42%	71.05%
09/05/2006	55,920	20.91%	17.48%	87.56%	12.44%	71.14%
10/05/2006	54,565	20.85%	17.56%	87.52%	12.48%	71.09%
11/05/2006	54,672	21.37%	17.57%	87.48%	12.52%	71.29%
12/05/2006	52,376	21.50%	17.72%	87.43%	12.57%	70.93%
15/05/2006	50,634	21.47%	17.87%	87.31%	12.69%	70.97%
16/05/2006	51,434	21.42%	17.95%	87.23%	12.77%	71.17%
17/05/2006	50,738	21.41%	17.85%	87.18%	12.82%	71.82%
18/05/2006	49,882	21.32%	17.92%	87.11%	12.89%	71.92%
22/05/2006	45,805	21.29%	18.38%	87.05%	12.95%	70.42%
23/05/2006	46,881	21.28%	18.54%	86.88%	13.12%	70.77%
24/05/2006	45,178	21.25%	18.61%	86.89%	13.11%	70.49%
25/05/2006	46,107	21.25%	18.67%	86.79%	13.21%	70.73%
26/05/2006	48,633	21.23%	19.08%	86.46%	13.54%	70.97%
29/05/2006	48,995	21.17%	19.19%	86.32%	13.68%	71.30%
30/05/2006	47,594	21.17%	19.22%	86.32%	13.68%	71.21%
31/05/2006	47,916	21.07%	19.21%	86.32%	13.68%	71.22%
01/06/2006	48,108	20.97%	19.75%	85.59%	14.41%	72.96%
02/06/2006	49,322	20.94%	19.82%	85.53%	14.47%	72.99%
05/06/2006	47,674	20.84%	20.53%	84.72%	15.28%	74.44%
06/06/2006	46,975	20.85%	20.67%	84.55%	15.45%	74.76%
07/06/2006	46,030	20.80%	20.73%	84.51%	15.49%	74.75%

08/06/2006	44,209	20.66%	21.04%	84.23%	15.77%	74.97%
09/06/2006	43,390	20.48%	21.04%	84.24%	15.76%	74.91%
12/06/2006	42,767	20.38%	21.05%	84.23%	15.77%	74.89%
13/06/2006	40,679	20.23%	21.19%	84.21%	15.79%	74.53%
14/06/2006	41,242	20.21%	21.43%	83.93%	16.07%	75.02%
15/06/2006	42,148	20.22%	21.78%	83.52%	16.48%	75.67%
16/06/2006	42,782	20.20%	21.94%	83.34%	16.66%	75.93%
19/06/2006	43,907	20.23%	22.01%	83.29%	16.71%	75.92%
20/06/2006	43,691	20.22%	22.05%	83.25%	16.75%	75.99%
21/06/2006	42,679	20.27%	22.10%	83.22%	16.78%	75.94%
22/06/2006	43,313	20.27%	22.17%	83.12%	16.88%	76.11%
23/06/2006	41,949	20.29%	22.60%	82.67%	17.33%	76.67%
26/06/2006	40,438	20.25%	23.20%	82.04%	17.96%	77.42%
27/06/2006	41,217	20.26%	24.61%	80.46%	19.54%	79.40%
28/06/2006	42,265	20.27%	25.88%	79.09%	20.91%	80.81%
29/06/2006	43,222	20.28%	25.82%	79.18%	20.82%	80.67%
30/06/2006	44,734	20.40%	25.22%	79.86%	20.14%	79.87%
03/07/2006	44,836	20.45%	23.95%	81.26%	18.74%	78.25%
04/07/2006	46,130	20.42%	23.36%	81.98%	18.02%	77.15%
05/07/2006	44,661	20.48%	23.16%	82.27%	17.73%	76.57%
06/07/2006	45,121	20.48%	23.50%	81.88%	18.12%	77.13%
07/07/2006	45,774	20.49%	23.49%	81.89%	18.11%	77.10%
10/07/2006	45,678	20.52%	23.32%	82.08%	17.92%	76.84%
11/07/2006	45,445	20.52%	23.26%	82.14%	17.86%	76.78%
12/07/2006	45,373	20.53%	22.78%	82.71%	17.29%	75.90%
13/07/2006	44,296	21.18%	22.78%	82.74%	17.26%	75.76%
14/07/2006	42,694	21.24%	22.84%	82.74%	17.26%	75.56%
17/07/2006	41,259	21.32%	22.89%	82.75%	17.25%	75.37%
18/07/2006	42,472	21.38%	22.94%	82.72%	17.28%	75.31%
19/07/2006	42,371	21.49%	22.96%	82.70%	17.30%	75.34%
20/07/2006	44,835	21.51%	23.07%	82.75%	17.25%	74.77%
21/07/2006	44,259	21.91%	23.35%	82.39%	17.61%	75.39%
24/07/2006	44,235	21.89%	23.41%	82.31%	17.69%	75.57%
25/07/2006	44,670	21.93%	23.40%	82.33%	17.67%	75.53%
26/07/2006	45,565	21.98%	23.39%	82.36%	17.64%	75.44%
27/07/2006	46,603	21.83%	23.40%	82.36%	17.64%	75.36%
28/07/2006	45,665	21.74%	23.37%	82.42%	17.58%	75.21%
31/07/2006	45,531	21.75%	23.35%	82.44%	17.56%	75.18%

01/08/2006	45,024	21.73%	23.34%	82.45%	17.55%	75.17%
02/08/2006	44,976	21.69%	23.32%	82.48%	17.52%	75.14%
03/08/2006	44,423	21.53%	23.33%	82.48%	17.52%	75.12%
04/08/2006	45,679	21.48%	23.35%	82.49%	17.51%	75.00%
07/08/2006	45,425	21.49%	23.32%	82.53%	17.47%	74.92%
08/08/2006	46,234	21.49%	23.32%	82.53%	17.47%	74.94%
09/08/2006	47,526	21.46%	23.24%	82.60%	17.40%	74.90%
10/08/2006	47,378	21.43%	23.18%	82.67%	17.33%	74.78%
11/08/2006	47,371	21.30%	23.16%	82.69%	17.31%	74.75%
14/08/2006	47,647	21.29%	23.10%	82.75%	17.25%	74.66%
15/08/2006	47,935	21.12%	23.11%	82.75%	17.25%	74.67%
16/08/2006	48,810	21.09%	23.08%	82.78%	17.22%	74.60%
17/08/2006	47,907	21.08%	23.00%	82.88%	17.12%	74.42%
18/08/2006	47,228	21.09%	22.91%	83.00%	17.00%	74.19%
21/08/2006	46,852	21.09%	22.86%	83.07%	16.93%	74.06%
22/08/2006	46,832	21.09%	22.77%	83.17%	16.83%	73.93%
23/08/2006	46,863	21.08%	22.75%	83.19%	16.81%	73.90%
24/08/2006	46,254	21.02%	22.76%	83.18%	16.82%	73.88%
25/08/2006	46,590	21.03%	22.71%	83.19%	16.81%	74.00%
28/08/2006	46,373	20.97%	22.67%	83.17%	16.83%	74.23%
29/08/2006	46,663	20.95%	22.66%	83.18%	16.82%	74.21%
31/08/2006	47,161	20.94%	22.69%	83.14%	16.86%	74.27%
01/09/2006	47,314	20.92%	22.69%	83.14%	16.86%	74.27%
04/09/2006	48,364	20.90%	22.71%	83.13%	16.87%	74.26%
05/09/2006	48,318	20.88%	22.69%	83.16%	16.84%	74.22%
06/09/2006	47,628	20.88%	22.68%	83.15%	16.85%	74.28%
07/09/2006	47,257	20.88%	22.68%	83.14%	16.86%	74.32%
08/09/2006	47,094	20.95%	22.69%	83.14%	16.86%	74.33%
11/09/2006	46,856	20.93%	22.75%	83.06%	16.94%	74.47%
12/09/2006	47,437	20.93%	22.77%	83.02%	16.98%	74.56%
13/09/2006	47,618	20.93%	22.75%	83.04%	16.96%	74.53%
14/09/2006	47,284	20.93%	22.79%	83.00%	17.00%	74.59%
15/09/2006	48,215	20.95%	22.80%	83.00%	17.00%	74.57%
18/09/2006	48,172	20.94%	22.80%	82.99%	17.01%	74.59%
19/09/2006	48,325	20.92%	22.81%	82.97%	17.03%	74.65%
20/09/2006	48,234	21.00%	22.80%	82.98%	17.02%	74.66%
21/09/2006	47,667	21.03%	22.82%	82.96%	17.04%	74.66%
22/09/2006	45,938	21.02%	23.24%	82.52%	17.48%	75.20%

25/09/2006	45,527	21.01%	23.27%	82.48%	17.52%	75.29%
26/09/2006	45,973	21.02%	23.30%	82.43%	17.57%	75.42%
27/09/2006	46,453	21.01%	23.34%	82.38%	17.62%	75.47%
28/09/2006	47,113	20.99%	23.37%	82.31%	17.69%	75.69%
29/09/2006	46,608	20.99%	23.32%	82.30%	17.70%	75.90%
02/10/2006	46,785	20.98%	23.52%	82.03%	17.97%	76.42%
03/10/2006	46,623	20.98%	23.44%	82.04%	17.96%	76.63%
04/10/2006	45,970	20.98%	23.46%	82.02%	17.98%	76.64%
05/10/2006	46,697	20.98%	23.51%	81.98%	18.02%	76.66%
06/10/2006	46,420	20.98%	23.41%	82.08%	17.92%	76.54%
09/10/2006	46,626	19.81%	23.32%	82.14%	17.86%	76.57%
10/10/2006	47,380	19.81%	23.29%	82.13%	17.87%	76.71%
11/10/2006	47,650	19.81%	23.25%	82.15%	17.85%	76.76%
12/10/2006	48,453	19.81%	23.23%	82.18%	17.82%	76.70%
13/10/2006	48,703	19.81%	23.14%	82.28%	17.72%	76.56%
16/10/2006	49,398	19.81%	23.08%	82.32%	17.68%	76.59%
17/10/2006	48,667	19.84%	23.08%	82.31%	17.69%	76.63%
18/10/2006	50,480	19.70%	23.14%	82.31%	17.69%	76.43%
19/10/2006	50,465	19.73%	23.12%	82.33%	17.67%	76.42%
20/10/2006	50,108	19.69%	23.10%	82.35%	17.65%	76.39%
26/10/2006	51,384	19.65%	23.05%	82.44%	17.56%	76.18%
27/10/2006	51,602	19.64%	23.04%	82.45%	17.55%	76.17%
30/10/2006	50,783	19.60%	22.95%	82.56%	17.44%	75.97%
31/10/2006	51,403	19.61%	22.90%	82.58%	17.42%	76.06%
01/11/2006	51,381	19.60%	22.86%	82.59%	17.41%	76.16%
02/11/2006	49,869	19.60%	22.90%	82.58%	17.42%	76.05%
03/11/2006	49,393	19.60%	22.89%	82.58%	17.42%	76.10%
06/11/2006	49,908	19.60%	22.89%	82.58%	17.42%	76.09%
07/11/2006	50,612	19.50%	22.89%	82.59%	17.41%	76.05%
08/11/2006	49,979	19.50%	22.83%	82.63%	17.37%	76.06%
09/11/2006	50,108	19.44%	22.82%	82.62%	17.38%	76.14%
10/11/2006	49,681	19.40%	22.79%	82.66%	17.34%	76.06%
13/11/2006	48,912	19.30%	22.79%	82.68%	17.32%	76.00%
14/11/2006	49,650	19.30%	22.78%	82.69%	17.31%	76.00%
15/11/2006	49,660	19.26%	22.77%	82.70%	17.30%	75.99%
16/11/2006	49,159	19.25%	22.76%	82.71%	17.29%	75.95%
17/11/2006	48,245	19.20%	22.76%	82.73%	17.27%	75.89%
20/11/2006	47,995	19.14%	22.75%	82.73%	17.27%	75.91%

21/11/2006	48,208	18.90%	22.72%	82.73%	17.27%	76.02%
22/11/2006	47,109	18.90%	22.76%	82.68%	17.32%	76.10%
23/11/2006	47,488	18.90%	22.75%	82.69%	17.31%	76.08%
24/11/2006	46,902	18.90%	22.76%	82.69%	17.31%	76.06%
27/11/2006	47,878	18.90%	22.75%	82.69%	17.31%	76.09%
28/11/2006	46,562	18.90%	22.77%	82.69%	17.31%	76.02%
29/11/2006	47,670	18.90%	22.81%	82.68%	17.32%	75.95%
30/11/2006	47,720	18.90%	22.80%	82.69%	17.31%	75.94%
01/12/2006	47,753	18.85%	22.78%	82.70%	17.30%	75.96%
04/12/2006	47,048	18.71%	22.83%	82.65%	17.35%	76.02%
05/12/2006	47,744	18.70%	22.85%	82.63%	17.37%	76.05%
06/12/2006	47,668	18.70%	22.84%	82.63%	17.37%	76.04%
07/12/2006	49,953	18.70%	22.90%	82.64%	17.36%	75.82%
08/12/2006	49,184	18.70%	22.90%	82.63%	17.37%	75.86%
11/12/2006	49,281	18.65%	22.88%	82.64%	17.36%	75.88%
12/12/2006	48,859	18.64%	22.87%	82.65%	17.35%	75.85%
13/12/2006	48,318	18.65%	22.87%	82.65%	17.35%	75.83%
14/12/2006	49,165	18.81%	22.89%	82.66%	17.34%	75.78%
15/12/2006	50,019	19.21%	22.90%	82.66%	17.34%	75.74%
18/12/2006	49,508	19.18%	22.90%	82.66%	17.34%	75.73%
19/12/2006	48,583	19.22%	22.91%	82.66%	17.34%	75.70%
20/12/2006	48,444	19.50%	22.91%	82.66%	17.34%	75.70%
21/12/2006	48,611	19.50%	22.23%	83.47%	16.53%	74.37%
22/12/2006	48,768	19.50%	22.23%	83.46%	16.54%	74.38%
25/12/2006	48,182	19.29%	22.24%	83.46%	16.54%	74.35%
26/12/2006	48,255	19.40%	22.24%	83.46%	16.54%	74.36%
27/12/2006	47,961	19.39%	22.23%	83.46%	16.54%	74.40%
28/12/2006	48,648	19.39%	22.24%	83.46%	16.54%	74.36%
29/12/2006	48,551	19.39%	22.25%	83.44%	16.56%	74.40%
04/01/2007	48,414	19.38%	22.14%	83.54%	16.46%	74.33%
05/01/2007	47,625	19.30%	22.15%	83.52%	16.48%	74.38%
08/01/2007	46,833	19.30%	22.14%	83.55%	16.45%	74.30%
09/01/2007	45,904	19.29%	22.14%	83.58%	16.42%	74.19%
10/01/2007	45,467	19.22%	22.01%	83.58%	16.42%	74.61%
11/01/2007	46,895	19.21%	22.02%	83.61%	16.39%	74.41%
12/01/2007	47,626	19.20%	21.98%	83.61%	16.39%	74.56%
15/01/2007	48,897	19.20%	21.99%	83.61%	16.39%	74.54%
16/01/2007	48,723	19.20%	21.97%	83.61%	16.39%	74.60%

17/01/2007	49,136	19.20%	21.96%	83.61%	16.39%	74.63%
18/01/2007	50,511	19.20%	21.99%	83.61%	16.39%	74.52%
19/01/2007	50,506	19.20%	21.89%	83.68%	16.32%	74.55%
22/01/2007	51,887	19.20%	21.93%	83.68%	16.32%	74.42%
23/01/2007	51,870	19.20%	21.89%	83.72%	16.28%	74.37%
24/01/2007	53,033	19.18%	21.88%	83.75%	16.25%	74.25%
25/01/2007	53,120	19.09%	21.82%	83.82%	16.18%	74.14%
26/01/2007	52,641	19.08%	21.81%	83.82%	16.18%	74.17%
29/01/2007	51,933	19.10%	21.79%	83.85%	16.15%	74.11%
30/01/2007	51,852	19.08%	21.77%	83.86%	16.14%	74.13%
31/01/2007	51,549	19.09%	21.74%	83.89%	16.11%	74.11%
01/02/2007	53,054	19.10%	21.74%	83.93%	16.07%	73.89%
02/02/2007	54,233	19.08%	21.61%	84.10%	15.90%	73.55%
05/02/2007	53,749	19.08%	21.62%	84.10%	15.90%	73.54%
06/02/2007	53,441	18.99%	21.60%	84.10%	15.90%	73.59%
07/02/2007	52,789	18.96%	21.59%	84.10%	15.90%	73.63%
08/02/2007	52,234	18.90%	21.59%	84.10%	15.90%	73.63%
09/02/2007	52,861	18.86%	21.59%	84.10%	15.90%	73.62%
12/02/2007	52,713	18.81%	21.52%	84.10%	15.90%	73.87%
13/02/2007	53,435	18.64%	21.51%	84.10%	15.90%	73.91%
14/02/2007	54,439	18.63%	21.49%	84.14%	15.86%	73.80%
15/02/2007	55,343	18.91%	21.43%	84.24%	15.76%	73.57%
16/02/2007	55,069	18.89%	21.41%	84.25%	15.75%	73.57%
19/02/2007	56,022	18.86%	21.43%	84.25%	15.75%	73.52%
20/02/2007	55,802	18.86%	21.43%	84.25%	15.75%	73.52%
21/02/2007	54,112	18.85%	21.45%	84.25%	15.75%	73.44%
22/02/2007	55,423	18.84%	21.44%	84.28%	15.72%	73.33%
23/02/2007	55,008	18.78%	21.43%	84.29%	15.71%	73.31%
26/02/2007	55,127	18.77%	21.42%	84.28%	15.72%	73.37%
27/02/2007	52,485	18.76%	21.62%	84.17%	15.83%	73.23%
28/02/2007	52,062	18.78%	21.84%	83.89%	16.11%	73.76%
01/03/2007	49,526	18.74%	21.84%	83.91%	16.09%	73.66%
02/03/2007	50,910	18.74%	21.84%	83.88%	16.12%	73.80%
05/03/2007	49,936	18.75%	22.01%	83.68%	16.32%	74.12%
06/03/2007	50,634	18.75%	22.02%	83.68%	16.32%	74.10%
07/03/2007	50,840	18.76%	21.92%	83.68%	16.32%	74.45%
08/03/2007	52,073	18.74%	21.89%	83.68%	16.32%	74.54%
09/03/2007	52,966	18.71%	21.78%	83.83%	16.17%	74.25%

12/03/2007	52,883	18.70%	21.82%	83.75%	16.25%	74.44%
13/03/2007	52,459	18.70%	21.81%	83.76%	16.24%	74.46%
14/03/2007	50,853	18.70%	21.86%	83.76%	16.24%	74.32%
15/03/2007	51,761	18.69%	21.87%	83.76%	16.24%	74.26%
16/03/2007	52,579	18.66%	21.87%	83.77%	16.23%	74.20%
19/03/2007	52,616	18.66%	21.83%	83.82%	16.18%	74.11%
20/03/2007	52,464	18.66%	21.78%	83.82%	16.18%	74.27%
21/03/2007	53,173	18.66%	21.78%	83.83%	16.17%	74.27%
22/03/2007	54,299	18.65%	21.73%	83.88%	16.12%	74.19%
23/03/2007	54,574	18.65%	21.70%	83.89%	16.11%	74.23%
26/03/2007	54,309	18.65%	21.70%	83.89%	16.11%	74.24%
27/03/2007	54,042	18.65%	21.70%	83.89%	16.11%	74.24%
28/03/2007	53,982	18.65%	21.65%	83.89%	16.11%	74.39%
29/03/2007	54,749	18.65%	21.66%	83.89%	16.11%	74.35%
30/03/2007	54,567	18.66%	21.66%	83.89%	16.11%	74.35%
02/04/2007	54,349	18.67%	21.66%	83.89%	16.11%	74.36%
03/04/2007	55,454	18.65%	21.67%	83.89%	16.11%	74.32%
04/04/2007	55,999	18.65%	21.64%	83.89%	16.11%	74.44%
05/04/2007	57,516	18.65%	21.66%	83.90%	16.10%	74.31%
06/04/2007	57,677	18.65%	21.60%	83.97%	16.03%	74.20%
09/04/2007	57,723	18.61%	21.58%	83.98%	16.02%	74.22%
10/04/2007	56,931	18.60%	21.60%	83.96%	16.04%	74.23%
11/04/2007	57,981	18.61%	21.61%	83.98%	16.02%	74.16%
12/04/2007	57,307	18.59%	21.58%	83.97%	16.03%	74.26%
13/04/2007	57,911	18.59%	21.57%	83.96%	16.04%	74.34%
16/04/2007	58,749	18.59%	21.57%	83.98%	16.02%	74.28%
17/04/2007	58,602	18.59%	21.53%	83.98%	16.02%	74.43%
18/04/2007	57,197	18.49%	21.50%	84.04%	15.96%	74.21%
19/04/2007	58,161	18.34%	21.50%	84.06%	15.94%	74.13%
20/04/2007	59,630	18.34%	21.49%	84.10%	15.90%	73.98%
24/04/2007	59,140	18.32%	21.44%	84.13%	15.87%	74.02%
25/04/2007	60,600	18.30%	21.44%	84.17%	15.83%	73.84%
26/04/2007	60,365	18.30%	21.34%	84.29%	15.71%	73.62%
27/04/2007	59,154	18.28%	21.35%	84.30%	15.70%	73.54%
30/04/2007	56,812	18.25%	21.59%	84.10%	15.90%	73.65%
01/05/2007	54,678	18.25%	21.64%	84.11%	15.89%	73.42%
02/05/2007	55,396	18.20%	21.63%	84.13%	15.87%	73.36%
03/05/2007	56,354	18.20%	21.64%	84.13%	15.87%	73.33%

04/05/2007	55,927	18.19%	21.64%	84.14%	15.86%	73.31%
07/05/2007	55,829	18.19%	21.60%	84.15%	15.85%	73.39%
08/05/2007	55,817	18.10%	21.56%	84.19%	15.81%	73.31%
09/05/2007	56,346	18.00%	21.48%	84.20%	15.80%	73.59%
10/05/2007	56,155	17.94%	21.41%	84.21%	15.79%	73.76%
11/05/2007	55,842	17.86%	21.42%	84.19%	15.81%	73.83%
14/05/2007	56,299	17.91%	21.39%	84.21%	15.79%	73.80%
15/05/2007	55,935	17.85%	21.37%	84.22%	15.78%	73.84%
16/05/2007	56,857	17.80%	21.05%	84.21%	15.79%	75.02%
17/05/2007	57,328	17.80%	21.02%	84.21%	15.79%	75.11%
18/05/2007	57,478	17.80%	20.95%	84.21%	15.79%	75.37%
21/05/2007	57,547	17.80%	20.92%	84.22%	15.78%	75.42%
22/05/2007	57,697	17.78%	20.76%	84.24%	15.76%	75.92%
23/05/2007	57,805	17.78%	20.75%	84.25%	15.75%	75.92%
24/05/2007	57,643	17.75%	20.70%	84.25%	15.75%	76.09%
25/05/2007	57,558	17.74%	20.70%	84.25%	15.75%	76.09%
28/05/2007	58,507	17.78%	20.71%	84.25%	15.75%	76.04%
29/05/2007	58,503	17.70%	20.66%	84.27%	15.73%	76.12%
30/05/2007	57,591	17.70%	20.61%	84.28%	15.72%	76.28%
31/05/2007	58,487	17.86%	20.61%	84.27%	15.73%	76.30%
01/06/2007	57,746	18.47%	20.60%	84.28%	15.72%	76.34%
04/06/2007	57,275	18.53%	20.51%	84.28%	15.72%	76.64%
05/06/2007	57,759	18.50%	20.49%	84.28%	15.72%	76.71%
06/06/2007	56,979	18.56%	20.49%	84.28%	15.72%	76.72%
07/06/2007	55,654	18.55%	20.39%	84.28%	15.72%	77.10%
08/06/2007	54,948	18.39%	20.39%	84.28%	15.72%	77.09%
11/06/2007	55,611	18.39%	20.37%	84.28%	15.72%	77.15%
12/06/2007	54,866	18.30%	20.38%	84.28%	15.72%	77.16%
13/06/2007	55,107	18.30%	20.35%	84.27%	15.73%	77.30%
14/06/2007	55,151	18.31%	20.34%	84.28%	15.72%	77.29%
15/06/2007	56,862	18.31%	20.35%	84.28%	15.72%	77.22%
18/06/2007	57,400	18.23%	20.35%	84.28%	15.72%	77.25%
19/06/2007	57,362	18.21%	20.29%	84.28%	15.72%	77.47%
20/06/2007	57,273	18.17%	20.19%	84.31%	15.69%	77.70%
21/06/2007	56,896	18.16%	20.17%	84.32%	15.68%	77.75%
22/06/2007	56,653	18.15%	20.15%	84.31%	15.69%	77.88%
25/06/2007	56,132	18.15%	20.12%	84.32%	15.68%	77.93%
26/06/2007	56,832	18.15%	20.06%	84.33%	15.67%	78.14%

27/06/2007	55,600	18.15%	20.09%	84.33%	15.67%	78.03%
28/06/2007	57,015	18.15%	20.08%	84.32%	15.68%	78.08%
29/06/2007	58,414	17.80%	20.05%	84.32%	15.68%	78.19%
02/07/2007	59,277	17.75%	20.06%	84.32%	15.68%	78.17%
03/07/2007	60,684	17.75%	20.08%	84.32%	15.68%	78.10%
04/07/2007	61,812	17.25%	20.03%	84.40%	15.60%	77.91%
05/07/2007	62,444	17.25%	19.94%	84.50%	15.50%	77.72%
06/07/2007	62,332	17.25%	19.94%	84.50%	15.50%	77.72%
09/07/2007	64,197	17.25%	19.94%	84.52%	15.48%	77.66%
10/07/2007	63,175	17.25%	19.86%	84.53%	15.47%	77.88%
11/07/2007	62,448	17.25%	19.80%	84.53%	15.47%	78.11%
12/07/2007	65,128	17.25%	19.84%	84.54%	15.46%	77.89%
13/07/2007	65,267	17.21%	19.82%	84.57%	15.43%	77.85%
16/07/2007	64,876	17.20%	19.65%	84.57%	15.43%	78.54%
17/07/2007	64,841	17.20%	19.61%	84.60%	15.40%	78.53%
18/07/2007	64,143	17.20%	19.62%	84.60%	15.40%	78.50%
19/07/2007	67,343	17.15%	19.74%	84.61%	15.39%	77.99%
20/07/2007	66,900	17.12%	19.72%	84.61%	15.39%	78.04%
23/07/2007	70,635	16.90%	19.81%	84.67%	15.33%	77.39%
24/07/2007	69,450	16.89%	19.74%	84.75%	15.25%	77.28%
25/07/2007	69,147	16.75%	19.71%	84.79%	15.21%	77.21%
26/07/2007	65,876	16.45%	19.78%	84.84%	15.16%	76.62%
27/07/2007	64,596	16.45%	19.83%	84.81%	15.19%	76.58%
30/07/2007	64,426	16.30%	19.79%	84.85%	15.15%	76.54%
31/07/2007	66,326	16.30%	19.76%	84.89%	15.11%	76.46%
01/08/2007	64,215	16.30%	19.82%	84.89%	15.11%	76.23%
02/08/2007	64,269	16.34%	19.81%	84.89%	15.11%	76.29%
03/08/2007	63,366	16.31%	19.78%	84.89%	15.11%	76.39%
06/08/2007	63,026	16.30%	19.77%	84.90%	15.10%	76.36%
07/08/2007	63,412	16.30%	19.77%	84.91%	15.09%	76.35%
08/08/2007	65,163	16.30%	19.79%	84.93%	15.07%	76.17%
09/08/2007	62,388	16.25%	19.89%	84.93%	15.07%	75.76%
10/08/2007	61,175	16.25%	19.92%	84.91%	15.09%	75.77%
13/08/2007	62,667	16.25%	19.88%	84.96%	15.04%	75.64%
14/08/2007	62,182	16.25%	19.87%	84.96%	15.04%	75.67%
15/08/2007	59,539	16.25%	20.07%	84.84%	15.16%	75.52%
16/08/2007	55,546	16.25%	20.67%	84.41%	15.59%	75.43%
17/08/2007	58,339	16.25%	20.83%	84.37%	15.63%	75.04%

20/08/2007	57,672	16.25%	20.81%	84.39%	15.61%	75.01%
21/08/2007	56,443	16.25%	20.87%	84.34%	15.66%	75.01%
22/08/2007	58,633	16.26%	20.93%	84.36%	15.64%	74.73%
23/08/2007	59,321	16.26%	20.85%	84.47%	15.53%	74.50%
24/08/2007	58,499	16.25%	20.86%	84.46%	15.54%	74.48%
27/08/2007	59,983	16.19%	20.84%	84.53%	15.47%	74.25%
28/08/2007	59,682	16.18%	20.81%	84.53%	15.47%	74.32%
29/08/2007	60,215	16.20%	20.82%	84.53%	15.47%	74.32%
31/08/2007	63,211	16.20%	20.93%	84.53%	15.47%	73.93%
03/09/2007	62,806	16.20%	20.89%	84.58%	15.42%	73.83%
04/09/2007	62,963	16.20%	20.87%	84.59%	15.41%	73.81%
05/09/2007	62,115	16.27%	20.86%	84.63%	15.37%	73.71%
06/09/2007	62,376	16.31%	20.85%	84.63%	15.37%	73.72%
07/09/2007	61,691	16.42%	20.85%	84.64%	15.36%	73.68%
10/09/2007	60,951	16.45%	20.85%	84.64%	15.36%	73.66%
11/09/2007	61,949	16.94%	20.85%	84.64%	15.36%	73.68%
12/09/2007	61,933	16.93%	20.85%	84.64%	15.36%	73.68%
13/09/2007	62,512	16.94%	20.85%	84.64%	15.36%	73.67%
14/09/2007	64,056	16.43%	20.68%	84.89%	15.11%	73.07%
17/09/2007	63,900	16.91%	20.64%	84.93%	15.07%	73.02%
18/09/2007	63,932	16.45%	20.57%	84.93%	15.07%	73.28%
19/09/2007	68,691	16.93%	20.56%	85.29%	14.71%	71.57%
20/09/2007	68,186	16.43%	20.56%	85.29%	14.71%	71.56%
21/09/2007	68,444	16.91%	20.55%	85.29%	14.71%	71.58%
24/09/2007	67,967	16.92%	20.55%	85.29%	14.71%	71.59%
25/09/2007	67,059	16.43%	20.55%	85.29%	14.71%	71.58%
26/09/2007	68,916	16.30%	20.59%	85.29%	14.71%	71.46%
27/09/2007	69,127	16.24%	20.59%	85.29%	14.71%	71.46%
28/09/2007	68,547	16.26%	20.56%	85.32%	14.68%	71.42%
01/10/2007	68,725	16.26%	20.54%	85.32%	14.68%	71.44%
02/10/2007	69,522	16.26%	20.54%	85.32%	14.68%	71.44%
03/10/2007	68,635	16.26%	20.55%	85.32%	14.68%	71.40%
04/10/2007	69,599	16.28%	20.52%	85.36%	14.64%	71.33%
05/10/2007	72,261	16.28%	20.57%	85.38%	14.62%	71.05%
08/10/2007	71,488	16.30%	20.45%	85.54%	14.46%	70.70%
09/10/2007	73,885	16.21%	20.50%	85.55%	14.45%	70.51%
10/10/2007	73,206	16.20%	20.41%	85.65%	14.35%	70.28%
11/10/2007	74,222	16.69%	20.41%	85.65%	14.35%	70.30%

15/10/2007	74,568	16.68%	20.18%	85.87%	14.13%	70.02%
16/10/2007	72,984	16.67%	20.20%	85.87%	14.13%	69.92%
17/10/2007	73,901	16.19%	20.12%	85.98%	14.02%	69.65%
18/10/2007	71,446	16.20%	20.16%	85.98%	14.02%	69.54%
19/10/2007	70,123	16.16%	20.18%	85.98%	14.02%	69.47%
22/10/2007	68,172	16.05%	20.23%	85.95%	14.05%	69.44%
23/10/2007	70,577	16.04%	20.26%	85.98%	14.02%	69.19%
24/10/2007	70,453	15.99%	20.26%	85.98%	14.02%	69.18%
25/10/2007	70,521	15.94%	20.21%	85.98%	14.02%	69.35%
26/10/2007	71,597	16.00%	20.21%	85.98%	14.02%	69.34%
30/10/2007	72,126	16.47%	20.18%	86.02%	13.98%	69.26%
31/10/2007	73,362	16.11%	20.19%	86.02%	13.98%	69.24%
01/11/2007	73,161	16.10%	20.18%	86.02%	13.98%	69.28%
02/11/2007	72,305	16.58%	20.19%	86.02%	13.98%	69.25%
05/11/2007	70,983	16.57%	20.20%	86.02%	13.98%	69.19%
06/11/2007	72,268	16.57%	20.20%	86.02%	13.98%	69.20%
07/11/2007	71,049	16.57%	20.21%	86.02%	13.98%	69.17%
08/11/2007	69,789	16.57%	20.23%	86.02%	13.98%	69.10%
09/11/2007	67,823	16.57%	20.27%	86.02%	13.98%	68.97%
12/11/2007	68,448	16.57%	20.26%	86.01%	13.99%	69.05%
13/11/2007	69,464	16.57%	20.26%	86.02%	13.98%	69.02%
14/11/2007	70,858	16.06%	20.27%	86.02%	13.98%	68.95%
15/11/2007	69,495	16.07%	20.23%	86.06%	13.94%	68.88%
16/11/2007	68,826	16.03%	20.23%	86.08%	13.92%	68.83%
19/11/2007	67,377	16.03%	20.26%	86.06%	13.94%	68.82%
20/11/2007	67,853	16.07%	20.24%	86.06%	13.94%	68.88%
21/11/2007	66,725	16.06%	20.21%	86.06%	13.94%	68.97%
22/11/2007	66,069	16.06%	20.20%	86.06%	13.94%	69.03%
23/11/2007	66,211	16.53%	20.23%	86.01%	13.99%	69.15%
26/11/2007	66,843	16.01%	20.26%	85.98%	14.02%	69.22%
27/11/2007	65,067	16.03%	20.35%	85.90%	14.10%	69.31%
28/11/2007	67,540	16.01%	20.42%	85.87%	14.13%	69.17%
29/11/2007	67,407	16.03%	20.69%	85.52%	14.48%	70.00%
30/11/2007	68,777	16.03%	20.60%	85.52%	14.48%	70.31%
03/12/2007	68,880	16.50%	20.59%	85.51%	14.49%	70.36%
04/12/2007	68,410	16.06%	20.31%	85.89%	14.11%	69.48%
05/12/2007	70,567	16.08%	20.62%	85.54%	14.46%	70.17%
06/12/2007	71,618	16.09%	20.36%	85.87%	14.13%	69.38%

07/12/2007	71,958	16.09%	20.62%	85.52%	14.48%	70.24%
10/12/2007	72,150	16.10%	20.33%	85.89%	14.11%	69.43%
11/12/2007	71,856	16.15%	20.59%	85.53%	14.47%	70.27%
12/12/2007	72,666	16.13%	20.57%	85.53%	14.47%	70.33%
13/12/2007	70,419	16.13%	20.35%	85.89%	14.11%	69.31%
14/12/2007	69,971	16.13%	20.29%	85.98%	14.02%	69.08%
17/12/2007	68,205	16.58%	20.29%	86.03%	13.97%	68.86%
18/12/2007	69,074	16.65%	20.30%	86.01%	13.99%	68.89%
19/12/2007	68,404	16.72%	20.31%	86.01%	13.99%	68.87%
24/12/2007	70,667	16.69%	20.35%	86.02%	13.98%	68.70%
25/12/2007	70,448	16.76%	20.35%	86.01%	13.99%	68.74%
26/12/2007	70,516	16.80%	20.35%	86.02%	13.98%	68.73%
27/12/2007	70,254	17.12%	20.36%	86.00%	14.00%	68.76%
28/12/2007	70,755	17.22%	20.34%	86.00%	14.00%	68.82%
31/12/2007	70,457	17.19%	20.34%	85.98%	14.02%	68.91%