

Turkish REITs: An Overview of the Industry and its Performance

by

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Submitted to the Department of Architecture in Partial Fulfillment of the Requirements  
for the Degree of Master of Science in Real Estate Development

at the

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## **ABSTRACT:**

This thesis aims to provide insight into the emerging real estate investment trust (REIT) sector of Turkey, the reasons underlying its creation, its legal and economic evolution and its performance since the commencement of the REIT Sector Index in January 2000.

The paper utilizes a combination of quantitative methods and qualitative discussion in order to identify and analyze some of the key issues that define the current situation of the Turkish REIT industry. The paper can be viewed as a composition of two main parts.

The first part provides a qualitative discussion of the emergence of REIT, how it is legally structured and how it fits into the broader real estate markets as well as the Turkish capital markets, particularly the stock market.

The second part expands on the quantification of the REIT industry. This section also includes the application of the Modern Portfolio Theory to examine how REIT stocks individually and as an industry fit into optimal risky portfolios at various risk and return preferences both based on their actual inflation adjusted stock returns and on their net asset value returns.

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## **Table of Contents**

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Abstract.....	2
Introduction.....	4
Roles of REITs.....	5
An Overview of the Turkish Real Estate Markets.....	6
Real Estate Finance in Turkey.....	10
Legal Framework of Turkish REITs.....	12
Taxation of REITs.....	23
Taxation of REIT Investors.....	24
A Quantitative Look at Turkish REITs.....	25
Putting REITs in Perspective: Istanbul Stock Exchange.....	32
Foreign Investment in Turkish REITs.....	34
Application of Modern Portfolio Theory.....	36
Discussion of Results.....	50
Conclusion.....	52
Bibliography.....	54

## **INTRODUCTION**

Real estate investment trusts (REITs) were introduced to the Turkish capital markets for the first time with the legal framework prepared in 1995 and with the first IPO in 1996. They are allowed to invest in buildings, land, development projects, real estate backed securities, and to a limited extent other capital markets instruments such as government bonds and stocks.

Compared with REITs in developed capital markets, Turkish REITs have a tremendous growth potential in the near future due to the high expectations placed on them to bring transparency and professionalism to the broader real estate industry. As discussed in more detail in the later chapters, with the determination to create a favorable growth environment for the fledgling industry, authorities have provided REITs with some important tax incentives, as well as flexibility in managing their portfolios allowing REIT managers to take advantage of both the economic boom and bust periods.

With an amendment by the Capital Markets Board in 1998, REITS were obligated to make at least 49% of their stock public. Through this new framework, the principles and rules to make REITs more institutional and transparent have been emphasized. In order to promote the formation and growth of the industry, two important tax incentives have been granted to REITs. Specifically, REITs are exempted from both corporation tax and income tax giving them an opportunity to compete in an industry, where a large share of transactions are unrecorded and values of properties are widely understated in order to avoid taxes.

There are 9 REITs traded on the Istanbul Stock Exchange as of year end 2003, which have a combined market capitalization of \$380 million of which \$156 million has been

listed on the Istanbul Stock Exchange (ISE). This number is dwarfed by the combined market capitalization of US REITs at \$224 billion. In the US, REITs have grown to have a 1.3% share of NYSE total market capitalization, whereas in Turkey, share of REITs in the aggregate market capitalization of ISE listed companies is less than 0.6%. However, two factors contribute to the liquidity of Turkish REITs, namely the relatively high ratio of free float to market capitalization and the high average daily transaction volume. When these two factors are taken into consideration, REITs account for 1.27% of the daily turnover of ISE, which is much higher than the same ratio in the US, where REITs only account for 0.01% of the daily transaction volume of NYSE.

### **ROLES of REITS**

Real estate has traditionally been a popular investment tool especially in highly inflationary economies such as Turkey as it provides an excellent hedge against inflation. However, due to the relatively illiquid nature of real estate, the capital invested in land and buildings has not been contributed to economic growth. Hence, the inefficiency in the allocation of capital has impeded economic growth over time.

REITs were seen as a means to address this problem and achieve efficient integration of capital markets and the real estate market. The performance of REITs in developed economies has justified this goal to a great extent.

REITs enable the pooling and channeling of limited funds contributed by individuals to large scale projects. This way, individuals, who otherwise cannot afford to invest in real estate, have a way to finance and benefit from large scale projects. Furthermore, when the investment needs to be liquidated, the difficulties of liquidation of a large scale real estate

project will be eliminated through listing the shares in the stock exchange. However, the liquidity aspect is only possible through the existence of a relatively deep secondary market.

In Turkey, REITs have another important role: Eliminating the unrecorded real estate market and bringing transparency and discipline to the broader real estate sector. REITs achieve this role in cooperation with appraisal firms. All transactions and the portfolio valuations of REITs are based on appraisal reports. The appraisers are professional institutions certified by the Capital Markets Board (CMB). The appraisal based portfolio statements are published on a monthly basis. Consequently, investors are informed about the current market values of the REIT assets, which are otherwise recorded in the quarterly financial statements at cost. A large share of the real estate transactions in Turkey is unrecorded or “under-recorded”, meaning that the declared value of the transaction is substantially less than its market value, mainly in order to avoid taxes. This problem is targeted through the growth of REITs in scale and effectiveness.

REITS are also seen as institutions that may overcome the problem of squatter, a byproduct of rapid migration from East to West, leading to disorganized, unhealthy development of the major Turkish cities. A healthy, well planned development is only possible through institutionalization of the real estate industry.

## **AN OVERVIEW OF THE TURKISH REAL ESTATE MARKETS**

With a population of 68 Million, and 65% of its population under the age of 30, Turkey's dynamic economy is a complex mix of modern industry and commerce along with a traditional agriculture sector that in 2001 still accounted for 40% of employment. While

the private sector has been increasing its share in economy over time, the state still plays a major role in basic industry, banking, transport, and communication.<sup>1</sup>

Over the last two decades, Turkey has largely liberalized its economy and integrated with the global economy. In 1996, Turkey has entered into a customs union with the European Union and has been accepted as a candidate for full membership in 1999. Bordering the Black Sea in the north and the Mediterranean Sea in the south, Turkey has historically played a pivotal role in the economic activity between the economies of Europe, Central Asia and the Middle East.

Due to the limited supply of alternative investment opportunities, real estate has traditionally been considered as a relatively safe and popular outlet for private investments in Turkey. “Real estate is estimated to have a share of 40% of the total capital investments in Turkey.”<sup>2</sup> In the last two decades, its attractiveness has increased due to factors like urban immigration, new commercial developments and increasing demand for new office space with contemporary design and features. Another turning point for especially the housing markets has been the earthquakes of 1999, after which the demand for high-quality housing has skyrocketed, as home buyers have become conscious of the importance of construction quality.<sup>3</sup> In the aftermath of the earthquakes, REITs have received considerable attention as the future leaders of high quality housing supply.<sup>4</sup> Not failing the expectations, in 2002, Yapi Kredi Koray REIT won the first prize

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<sup>1</sup> CIA World Factbook, Turkey, 2003

<sup>2</sup> Teker, Murat B., Real Estate Finance and Investments through Capital Markets Instruments, 2000, p. 1

<sup>3</sup> Kodal, Hakan, “Earthquake is the Main Issue”, GYODER Press Release, 2001

<sup>4</sup> Ata Invest, REIT Industry Report, Feb 18 2004

at France's prestigious MIPIM fair among 100 competitors with its "Istanbul Istanbul House Project".<sup>5</sup>

In the same year, the Turkish economy underwent a serious financial crisis and a devaluation of the Turkish Lira. GNP decreased by 12.4% in the last quarter of 2001 and the inflation rate as measured by the Wholesale Price Index (WPI) reached 90%. Despite signs of economic recovery in early 2002, political distress within the coalition government led to another trough in the economy resulting in early elections on November 3<sup>rd</sup>, 2002. Economic recovery, which continues today started again after the elections through which a single party government was elected for the first time after almost 10 years of inefficient coalition governments.<sup>6</sup>

The real estate market was hit hard by the crisis with significant decline in prices and increase in vacancy rates. At the beginning of 2003, due to the second Iraq war, a third wave of decline in real estate prices brought the market to the lowest price levels for both sales and rentals since the 2001 crisis. Office and residential property were particularly impacted by the recession. Although the economy recovered with a GDP growth of 7.8% in 2002 and 5.9% in 2003, the office and residential market did not improve during this period with vacancy rates and rents remaining flat. Class A office rents that reached a peak in 1998 at \$19/month/m<sup>2</sup> remained at \$10.7 in June 2003 with vacancy rates around 19.6% in Istanbul CBD. The vacancy rates were considerably higher for office space out of CBD at 57.7%.<sup>7</sup> While the economic recession had a negative impact on rents and vacancies, the more fundamental problem that still impacts the industry is oversupply. Between 1998 and 2003, total supply of office space increased from 364,168m<sup>2</sup> to

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<sup>5</sup> Aksam (Daily Newspaper), 15/3/2003

<sup>6</sup> Colliers-Resco, Real Estate Review 2003 - Turkey

<sup>7</sup> NAI PEGA - Real Estate Market Report – Turkey, June 2003

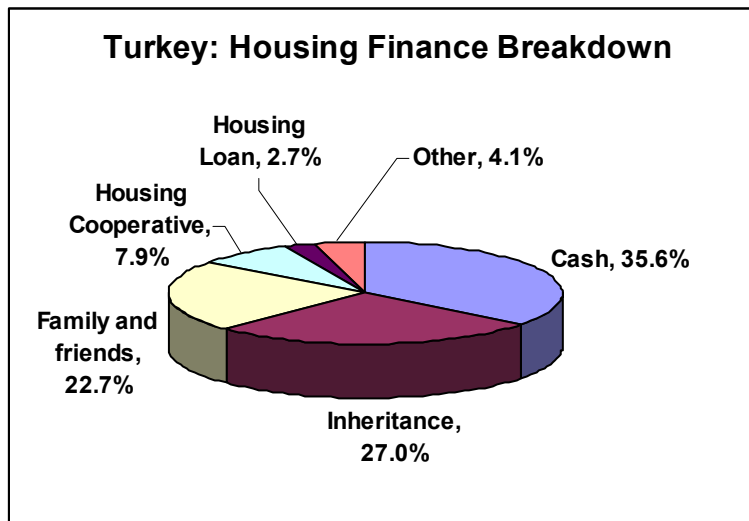


1,496,565m<sup>2</sup>. Despite the high vacancies, REITs have achieved significant success in maintaining demand for their properties. For example, Istanbul Is Towers, the largest single office property owned by Turkish REITs with 57,000m<sup>2</sup> of rentable area had 0% vacancy in 2003 with high quality tenants such as Reuters, Novartis, Accenture, IFC and other multinationals. Similarly, the 10 floors of Yapi Kredi Plaza, owned by Yapi Kredi Koray REIT was 100% occupied at \$12.5/month/m<sup>2</sup>, at a 16.8% premium to the market. There has been no considerable overall change in the price of residential units in Istanbul over 2002 figures. However, housing in some parts of the city, where residential development continues have seen a 10-15% rise. Toward the end of 2003, development activity increased in the residential market. Some districts within commuting distance to downtown Istanbul such as Zekeriyakoy, Omerli and Gokturk were chosen for development of luxury gated communities due to their natural setting as well as their relatively well developed infrastructure. In addition to the increasing demand for villa projects, currently there is a growing market demand for 8-10 story apartment buildings to accommodate low and middle-income groups. Construction of high rise-development, coupled with the planned start of the mortgage market is expected to provide an opportunity for people from these income groups to purchase affordable housing with a payment schedule similar to rent. These projects are desirable due to the amenities and services they provide, convenient access to public transportation, and security services. These developments are generally located around major shopping malls and entertainment centers.

## REAL ESTATE FINANCE IN TURKEY

In Turkey as in most other emerging economies, high cost of capital has been a major problem for the real estate industry. Banks have shied away from making long term loans mainly due to high and unpredictable inflation rates. While more affluent people acquired real estate with cash or through inheritance, lower income population has depended upon government-supported housing projects and co-operative schemes. According to a 1991 study by PIAR-GALLUP, merely 2.7% of total housing investments are financed through financial markets.<sup>8</sup> Although the study did not cover non-residential real estate, considering that residential real estate accounts for 86% of the total value of real estate in Turkey<sup>9</sup>, it provides a fairly good picture of the Turkish real estate finance markets.

Exhibit 1



Source: PIAR-GALLUP Marketing Research Co, 1991

An important factor that has prevented the growth of a real estate finance market is that, the earlier housing finance initiatives have focused on providing subsidized financing to low income population rather than creating an institution to facilitate an efficient market

<sup>8</sup> PIAR-GALLUP Marketing Research Co., “Consumer Attitude Survey Housing Finance”, Istanbul, 1991 p.29, (Cited in Teker, p.82)

<sup>9</sup> Eraydin, A., Turel A., Guzel, A., “Economic Impact of Housing Investments”, July, 1993, p. 159 (Cited in Teker, p. 2)

between supply and demand of capital. As a result of constant depreciation of allocated resources combined with high inflation and volatility, none of the earlier initiatives have achieved a critical scale or been sustainable for a long period of time. According to Kursat Tuncel, president of the Turkish REIT Association, this has led to the current home ownership level of 72%, which is much lower than the European Union average of 83%.<sup>10</sup>

This situation, however, is expected to change owing to the recent strict economic policy of the government to reduce and stabilize the rate of inflation. Investors are expected to seek new opportunities as bank rates and bond yields continue to plunge under the government's ambitious inflation reduction program. "At the recent auction on January 2004, the interest rates declined to almost 25% from 55% level a year earlier."<sup>11</sup>

A major obstacle in the Turkish real estate market is the absence of a mortgage system and similar long-term financing for property buyers. However, Housing Administration, various banks and financial institutions, both domestic and international, are currently working on projects to start a mortgage system in the country. Housing Administration has prepared a legal framework for the purchasing and securitization of mortgages. The system is expected to become active in 2005. Kursat Tuncel states that the mortgage market has a potential of reaching \$20-30 billion based on a comparison with other developing countries that have adopted the system.<sup>12</sup>

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<sup>10</sup> Dunya Newspaper, "Construction Sector will revitalize with Mortgage" June 23, 2004

<sup>11</sup> Ata Invest, REIT Industry Report, Feb 18, 2004

<sup>12</sup> Dunya Newspaper, "Construction Sector will Grow with Mortgage" June 23, 2004

## **LEGAL FRAMEWORK OF TURKISH REITS**

The Capital Market Board (CMB) has set the first legal framework governing the real estate investment trust structure as a capital markets establishment in the “Principles Communique Pertaining to Real Estate Investment Trusts” published on July 22, 1995.

The regulation has continued its evolution through amendments over the past decade and the last amendment has been published on May 18, 2004. This amendment has granted REITs with further flexibility regarding portfolio diversification, borrowing, allowable activities and equity participations in other firms. On the other hand, the 2004 Communique has emphasized transparency, standardization and has defined sanctions for failure to comply with the CMB regulations.

The most significant set of amendments to the initial regulations have been published on November 8, 1998 with the purpose of addressing the problems impeding the growth of REITs in Turkish Capital Markets. Practically on this date, the initial communiqué has been replaced by a new one, which is currently in effect with relatively minor amendments. Accordingly, the discussion of key issues regarding the REIT legal framework will be based on the 1998 Communiqué, and the recent amendments will be discussed within this context.

REITs are joint stock corporations like other corporations whose shares are traded on the Istanbul Stock Exchange; however, three main differences distinguish REITs from the other corporations. First, their operations are governed by the Communiqué on the Real Estate Investment Trusts issued by the Capital Markets Board. Second, they have tax exemption. Third, they are obliged to float a minimum of 49% of their equity in the stock market. Pursuant to the communiqué of the CMB, the REITs are obliged to apply to the

CMB for registration of their shares of stock within the year following the completion of incorporation or transformation procedures.

### **Official Definition and Types of REITs**

The 1998 Communiqué has officially defined REITs as “Capital market establishments which can invest in real property, capital market instruments backed by real estate, real estate projects, rights backed by real estate and capital market instruments, which can found ordinary partnerships and engage in other activities allowed by this Communiqué, provided to abide by procedures and principles stipulated by this Communiqué.”<sup>13</sup>

According to 1998 communiqué, REITs may be founded

- “a) For a specific period to realize a certain project
- b) For a specific or unlimited period to invest in specific areas,
- c) For a specific or unlimited period without any limitation of objectives.”<sup>14</sup>

The first type of REIT has a finite life and is either liquidated at the completion of the project for which it was established or transformed into one of the other two types both of which have perpetual lives. The second type of REIT specializes in a certain type of product or geographic region, while this is a popular model in developed economies such as US and Australia, none of the 9 Turkish REITs currently traded are of this type. All Turkish REITs are of the third type, which is not limited by a certain product type or geographic region, but is still bound by the general principles set by the CMB.

While the 1998 Communiqué only allows for equity REITs only allowing owned real estate to be contributed as in kind capital, the 2004 Communiqué has also allowed real

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<sup>13</sup> 1998 Communiqué, Article 4

<sup>14</sup> 1998 Communiqué, Article 5

estate backed securities to be considered as in kind capital contribution. With this change CMB has enabled the formation of mortgage REITs often seen in developed markets.

### **Foundation Conditions**

REITs may be founded instantaneously. Furthermore, existing corporations may “amend their articles of incorporation to comply with the provisions of the Communiqué, thereby changing their status to real estate investment trusts.”<sup>15</sup>

The key requirements for the two cases are identical. First of all, the company must be incorporated as a joint stock company with registered capital and must apply to CMB to list its shares and offer 49% of its issued capital to public within the year after the completion of incorporation. The minimum public offering of 49% is intended as a “control mechanism to create a balanced partnership structure and accordingly allow all shareholders, especially small shareholders to equally benefit from the profits generated from the real estate markets.”<sup>16</sup> However, the 49% public ownership still leaves ultimate control with the founder and eliminates any threat of takeovers in case of deep discounts to net asset value. Furthermore, the 49% public ownership must be maintained, which prevents management to buy back its shares in case of deep discounts, setting the stage for the current situation explained in the later chapters. On the other hand, the limited depth of the Turkish capital markets often makes it impossible to raise enough capital to float 49% of the company especially for large REITs. Therefore the 2004 Communiqué has softened this requirement by allowing gradual increase of free float to 49% over a longer period of time.

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<sup>15</sup> 1998 Communiqué, Article 6

<sup>16</sup> Kodal, Hakan, REIT Public Offering and Portfolio Formation, Yaklasim, Aug-1998, p 44

REITs must be founded with a minimum initial capital of 5.85 trillion TL<sup>17</sup>. (app.USD 4 Million), 25% of which must be contributed in cash. The reasons for the minimum capital are twofold. Real estate investments tend to be bulky and highly capital intensive, the requirement is intended to ensure REITs to have sufficient capital for effective portfolio diversification as well as building credibility from the perspective of small investors. As discussed earlier, the capital in excess of the required 25% minimum cash contribution will be “in kind” and can be either directly owned real estate, or real estate backed securities.

At least one of the founders of a REIT must be a “leader entrepreneur”. A leader entrepreneur can be an individual, a group of individuals or institution, whose presence is intended to increase the credibility of the REIT. Accordingly, the leader entrepreneur holds a minimum of 25% ownership in the REIT’s equity. Individuals also need to have a minimum stable annual income of TL585 billion and a net worth of TL 5.85 trillion in addition to proper education and experience in the field. Institutions are required to have a minimum of 5 years of operating history, an annual net income of TL 1.85 trillion and total assets of TL 18.5 trillion in addition to relevant expertise in order to become a “leader entrepreneur”. “However, financial qualifications may not be sought for cases, where the institution is a public enterprise or a corporate entity operating in favor of the public.”<sup>18</sup> The minimum income and net worth requirements are reassessed annually, “provided not to remain under 80% of the revaluation rate announced by the Ministry of Finance.” There is a 1 year lock-up period after initial public offering during “leader entrepreneur” cannot sell the shares representing its minimum ownership to public.

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<sup>17</sup> Updated for 2004 as published in the CMB 2003/62 Weekly Report

<sup>18</sup> 1998 Communiqué, Article 7

## **Principles Pertaining to Trust Management**

### **Qualifications of General Manager, Members of BOD and Founders**

According to the article 19 of the 1998 Communiqué, the general manager, board members and founders must hold a bachelor's degree in a relevant field from a higher educational institution and have a minimum experience of five years "in fields such as law, construction and finance which directly concern the real estate investments".

In addition, the founders and board members should not have experienced bankruptcy or been convicted of criminal acts. Their activity license within the framework of CMB should not have been canceled and they should not have held office in a firm which has been dismissed from Stock Exchange membership, where their responsibility was determined to cause the dismissal.

"The board of directors and auditors is elected and holds office pursuant to relevant articles of the Turkish Commercial Act (TCA). However, majority of the board members must be of Turkish nationality and at least 1/3 thereof must be independent<sup>19</sup> members."<sup>20</sup>

With this regulation, the concept of "independent" has been defined and put into practice for the first time in Turkish capital markets.<sup>21</sup> Consequently, the issue of conflict of interest between the founders and small investors has been addressed and interests of small investors has been protected by the independent board of directors.

"Members of the board of directors may be elected for a tenure of maximum one year. However, they may be re-elected for a tenure of one more year."<sup>22</sup> This regulation is an exception to the general rule of a three year tenure as regulated by the TCA. It is aimed to

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<sup>19</sup> For a complete list of criteria defining "independent" board members see 1998 Communiqué, Article 18

<sup>20</sup> 1998 Communiqué, Article 18

<sup>21</sup> Susar, Ozkan, All Aspects of Real Estate Investment Trusts, 2004, p139

<sup>22</sup> 1998 Communiqué, Article 17



ensure the performance of the board members and there is no restriction on the reelection of the same members for multiple years.

## **Principles Pertaining to Investments and Portfolio Management**

### **Management of the Trust Portfolio**

According to Article 22 of the 1998 Communique, REITs may choose to manage their own portfolio in house or hire independent consultants for services such as “development of the portfolio and exploration of alternative opportunities, including project development and control services”. However, the consultants must be licenced by the CMB for portfolio management. The contract with the third party providers should be approved by the board of directors and terminates at the end of a 1-year period, without further notice unless it is renewed. The total of the commissions to be paid for consultancy services may not exceed 1% of the assets or 15% of the net annual profit of the trust.

### **Scope of Activities**

Article 25 of the 1998 Communiqué lays out the operating principles of REITs. “The main objective underlying the creation of REIT structure is to address the problems of efficient real estate financing and securitization of real estate.”<sup>23</sup> Accordingly, operations of REITs can be categorized into 2 main groups, namely real estate and capital markets instruments.

As such, REITs can engage in the following activities:

- a) Investing in capital market instruments based on real estate such as real estate certificates, asset backed securities and other similar securities accepted by the CMB.
- b) Purchase and sale of capital market tools and reverse repo transactions with such tools.

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<sup>23</sup> Susar, Ozkan, All Aspects of Real Estate Investment Trusts, 2004, p.141

- c) For the purposes of generating capital gains or earning rental income, REITs can purchase and sell real estates.
- d) Purchase of land to realise capital gains or to develop projects by means of setting usufruct on real estate.
- e) Purchase of foreign real estates on condition of obtaining ownership and investment in foreign real estate backed securities. However, the total value of these investments may not exceed 10% of its portfolio.
- f) Lease of real estates from third parties and renting them in return to generate rental income.
- g) Realise swap and forward transactions, write options for real estate backed securities.

### **Operating Restrictions**

According to Article 27 of the 1998 Communiqué, the following restrictions govern the operations of a REIT:

- a) REITs are not allowed to have control or management of any REIT in which it has invested. Moreover, they are not permitted to have more than 5% of either the total of issued capital or the voting rights.
- b) REITs are not permitted to invest in gold or valuable metals.
- c) REITs may not invest in capital market tools that are not quoted on the stock exchange or on any other organized market for the portfolio. Purchase and sale of capital market tools should be done through the stock exchange.
- d) REITs may not invest in agreements with maturity backed to goods or in goods.
- e) REITs may not sell marketable securities in short position or shall not lend marketable securities.

f) Except for hedging purposes, REITs may not invest in financial derivatives.

g) Except for legal liabilities such as taxes and fees, in purchase of assets to portfolio, REITs may not invest in assets that have a limitation for take-over.

### **Portfolio Restrictions**

Article 27 of the 1998 Communiqué details strict rules regarding portfolio diversification, however most of the percentage limits for diversification were discontinued with the 2004 Communiqué. Currently, the main portfolio limitation is that REITs must invest a minimum of 50% of their portfolio in real estate and real estate backed securities, which has been decreased from 75%. This change has enabled REITs to invest 50% of their portfolios in money and capital markets instrument and direct equity participations.

### **Sanctions**

The 2004 Communiqué defines the sanctions as a consequence of non-compliance with the portfolio limitations. If the share of real estate and real estate backed securities fall below 50% of a REIT's portfolio at the end of any quarter, it will be granted a one time allowance of 1 year to meet the requirements. If the REIT fails to meet the requirements at the of one year, it will be obligated to apply to CMB within 6 months to discontinue its status as a REIT. Failure to comply with this regulation will result in the termination of the corporate entity.

### **Property Management**

One of the key changes introduced by the 2004 Communiqué is that, in order to grant REITs operational and revenue diversification, REITs are allowed to provide security, maintenance, general management and similar services directly to the properties held in the portfolio. Prior to this change, REITs were obligated to contract with third party

providers for these services. This amendment is also important as it allows REITs to increase the value of their properties by providing high quality services through vertical integration.

### **Borrowing Restrictions**

According to Article 35 of the 1998 Communiqué, REITs may borrow up to an amount twice as much as the total equity amount stated on their last balance sheet in order to meet short term fund demand or costs related to their portfolio. This limit has been amended to 3 times the equity amount in the 2004 Communiqué.

### **Construction Services**

“Constructions of the projects undertaken by the trusts must be conducted by contractors with whom a contract has been executed regulating mutual rights and obligations of the parties.”<sup>24</sup> The selection of the contractor and contract conditions must be approved by the board of directors.

### **Appraisal Principles**

Use of independent appraisers for the valuation of REIT assets as well as rental rates for properties is of vital importance for REITs and has repeatedly emphasized by the CMB. From the minority shareholder’s perspective, independent appraisal is an added layer of protection in case of a conflict of interest with the management or controlling shareholders. From CMB’s perspective, independent appraisal is crucial for the proper monitoring of compliance with the portfolio restrictions.

The 1998 Communiqué defines the appraisal requirement in Article 38 based on two asset categories.

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<sup>24</sup> 1998 Communiqué, Article 36

a) REITs must comply with general CMB stipulations for inverse repurchasing transactions and evaluation of capital markets instruments.

b)“The values of real estate assets and rental rates should be assessed by an independent appraisal firm listed by the Committee and which is qualified as per article 39 of this Communiqué”<sup>25</sup>,

Specifically, the transactions that require independent appraisals are:

a) Purchase and sale of real estate holdings, rights and development projects;

b) Leasing of real estate holdings;

c) Leasing of real estate for lease;

d) Renewal or extension of rental contracts;

e) Mortgage contracts;

f) Commencement of construction of a development project (in order to determine whether legal procedures have been followed properly and completely.)

g) Assessment of the year-end values of portfolio assets, which have not been appraised during the year for any reason whatsoever.

### **Use of Expertise Values**

“Current values of assets and rights are assessed as of the end of each year. The year-end current value assessment is optional for assets, which have been assessed during the most recent quarter for any reason. If and when necessary, the trust may have the market value

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<sup>25</sup> Currently there are two appraisal firms listed by the CMB, which are “Gayrimenkul Ekspertiz ve Degerlendirme A.S.” and “Vakif Gayrimenkul Ekspertiz ve Degerlendirme A.S.”

of the portfolio assets appraised and disclose the net asset value of the REIT to the public.”<sup>26</sup>

Portfolio assets are recorded in financial statements at cost; however, latest appraisal values are stated as a footnote.

Portfolio assets may be made subject to long term rental contracts. In this case, however, the rentals stated in the contract must be renewed over current values, which are assessed at least once every five years.

Prior to the latest amendment in 2004, all rental contracts and transactions were required to be made at appraisal values, however the 2004 Communiqué provided REITs with more flexibility by allowing them to conduct transactions at a price different than the appraised values, while still observing appraisal values as the main reference point for transactions. In the event of these differences, the REIT is obliged to disclose the terms of the transaction to the public upon completion of the transaction.

### **Disclosure**

REITs are subject to the following disclosure requirements:

- a) Appraisal Reports: Any appraisal reports prepared pursuant to the CMB regulations must be sent to CMB within 6 business days.
- b) Transactions in excess of 10% of the portfolio value: The REIT board of directors is required to disclose any investment decisions in excess of 10% of the portfolio value to CMB within 6 business days.
- c) Portfolio Table: Portfolio table, which exhibits the portfolio assets, acquisitions costs and latest appraisal values must be sent to the Istanbul Stock Exchange within 6 days following month end.

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<sup>26</sup> 1998 Communiqué, Article 41

d) Independent auditor's report and financial statements: Financial statements such as balance sheet and income statement are prepared on a quarterly basis and are subjected to independent audit every six months. The financial statements and auditor's reports are submitted to CMB within 6 business days of completion. In addition, the same documents must be sent to the Istanbul Stock Exchange to be published in the daily bulletin within 10 weeks of the quarter end.

e) Annual Report: Annual report has to be submitted to CMB within 6 days upon completion.

f) A copy of the newspaper in which any announcement or advertisement regarding the REIT is published.

### **Dividend Payout Requirements**

A key difference between the Turkish REIT structure and those of developed capital markets including United States is that Turkish REITs are not required to pay out dividends on an annual basis. Consequently, the dividend payouts of the nine public REITs have been negligible over the past 4 years. One possible motivation behind giving REITs complete freedom over their dividend policies is to enable enhanced growth of REITs through 100% plow back of profits into new investments. This is especially important for emerging markets like Turkey, where the capital markets are relatively thin and outside capital is extremely scarce making it very expensive.

Another benefit that this leeway generates for REITs is that, profits of REITs are not taxed unless distributed out as dividends. Combined with exemption from capital gains tax for a holding period longer than 3 months, this freedom provides REIT investors with an excellent tax shelter, hence increasing the demand for REIT stocks.

## **TAXATION OF REITS**

In order to promote the growth of the REIT industry, the following tax incentives have been granted to REITs. Profits generated from the portfolio management activities of REIT are exempt from corporate tax. In addition, although an official exemption has not been granted, the income tax rate has been determined to be “zero” for REITs.

Aside from these two incentives, REITs are subject to all other applicable taxes all of which are based on appraisal based values. The most important tax liability for REITs is the value added tax (VAT), which has been established at 18% for all real estate transactions with the exception of residential units with an area less than 150 square meters. For these units, the value added tax has been established at 1%. Another exception to the VAT liability is the capital markets transactions that REITs engage in. As these transactions are considered as extraordinary activities for REITs, these transactions are exempted from VAT.<sup>27</sup>

VAT has been a substantial burden decreasing the competitiveness of REITs against individual investors, who are exempt from VAT and against the rest of the real estate industry in which with the exception of top tier real estate companies, understatement of real estate values is a very common phenomenon. In order to address this issue, REIT Industry has been actively lobbying for a decrease in the VAT rate applicable to REITs.

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<sup>27</sup> Colak, Ender – Alici, Askin, Real Estate Investment Trusts A to Z, 2001, p.90



## **TAXATION OF REIT INVESTORS**

### **a) Dividends received by individuals**

REIT dividends, are treated as income derived from marketable securities. According to the Income Tax Act (ITA) 50% of the dividends obtained by resident individuals from REITs is exempt from income tax.

The remaining 50% should be adjusted for the deduction ratio and the portion in excess of a declaration threshold of TL 12 billion must be filed to be subject to ordinary income tax ranging between 20% and 45% based on the individual's tax bracket. The deduction ratio adjustment is calculated by dividing the revaluation rate determined in accordance with the Tax Procedural Law by the average compound interest rate formed in government bonds and treasury bills auctions. This rate is announced by the Ministry of Finance subsequent to the year-end.

### **b) Dividends received by corporations**

“REIT dividends received by corporations in Turkey are subject to corporation tax at 30%. If redistributed to non-resident companies or individuals, those gains are also subject to dividend withholding tax at 10% in line with local regulations.”<sup>28</sup>

## **Taxation of capital gains from sale of REIT shares**

### **a) Capital gains received by individuals**

As is the same for all publicly traded stock, the capital gains derived from sale of REIT shares are exempt from capital gains tax if they are held for a period in excess of three months. Capital gains above TL 10 billion realized within 3 months of acquisition are subject to filing for taxation after adjusting for inflation at the Whole Sale Price Index.

### **a) Capital gains received by corporations**

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<sup>28</sup> Price Waterhouse Coopers, Real Estate Tax Summary 2003, p.10

Capital gains obtained from the sale of REIT shares by corporations are included in the corporate income and taxed at the 30% corporate tax rate. “However, there are certain tools that are provided to minimize tax burden on the sale of shares, namely the temporary corporate tax exemption the cost revision method as mentioned above.”<sup>29</sup>

Capital gains derived from the sale of shares by non-resident corporations that do not have a permanent establishment in Turkey will be declared after the application of cost adjustment (adjustment of the original cost with Whole Sale Price Index except for the month the shares are disposed), within 15 days following the sale of shares, through a special corporate tax return and be taxed at 30%. The 10% withholding tax calculated on such gains will also be declared through withholding tax return.

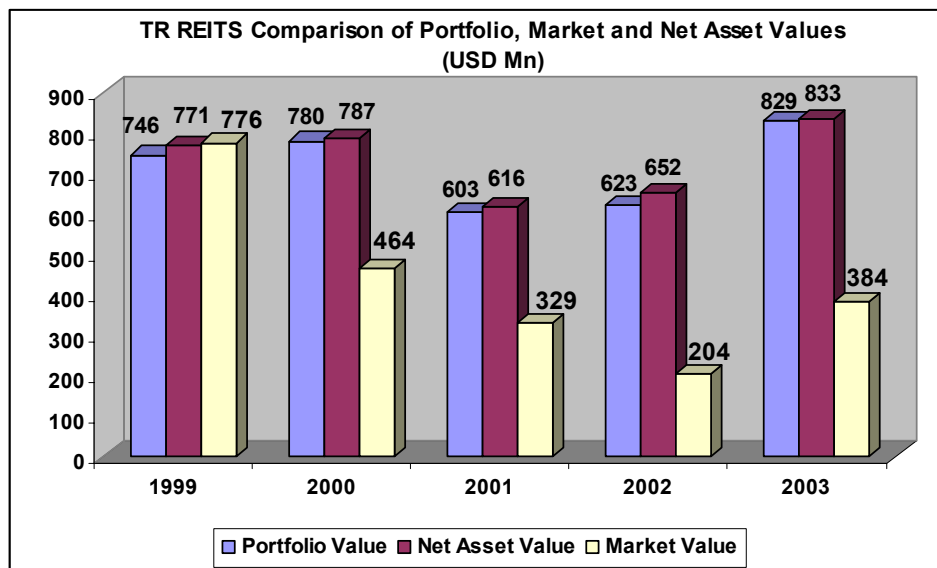
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<sup>29</sup> Price Waterhouse Coopers, Real Estate Tax Summary 2003, p. 11

## A QUANTITATIVE LOOK AT TURKISH REITS

As of December 2003, there are 9 REITs trading on the Istanbul Stock Exchange with a combined market capitalization of \$384 million and a combined net asset value of \$829 million and a slightly lower total portfolio value of \$829 million. Specifically, the total portfolio value is defined as the total appraisal based market values of buildings, land, development projects and the liquid assets held in the portfolio. The net asset value is defined as the sum of the total portfolio value and the non-portfolio liquid assets less the total debt. The market value, or market capitalization is the number of shares outstanding multiplied by the price per share on December 31, 2003. All numbers were compiled from Capital Markets Board monthly reports and converted into US Dollars at the month end exchange rates of the given months.

Exhibit 2

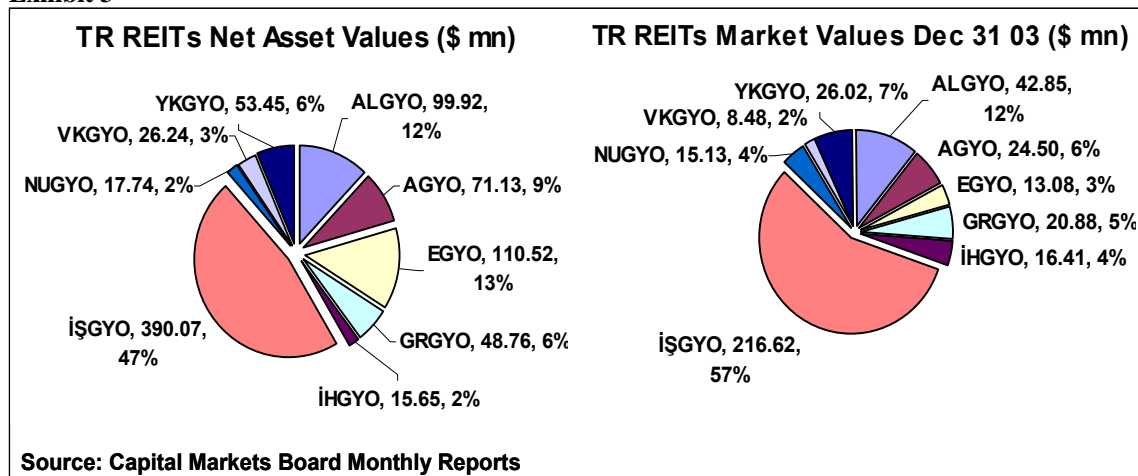


Source: Capital Markets Board Monthly Reports Table VII-1

The following pie charts exhibit the net asset values, market values and the market shares based on these respective measures for the 9 public REITs as of year end 2003. ISGYO is

the industry leader both in net asset value and market value terms with a 47% share of the total net assets and 57% share of the total market capitalization. In terms of net asset value, EGYO is the second largest REIT with a net asset value of \$110.5 million accounting for 13% of the industry; however due to its deeply discounted stock price, which is trading at more than 88% discount to net asset value, the company only has a 2% share of the total market capitalization making it the smallest REIT in market capitalization terms.

**Exhibit 3**

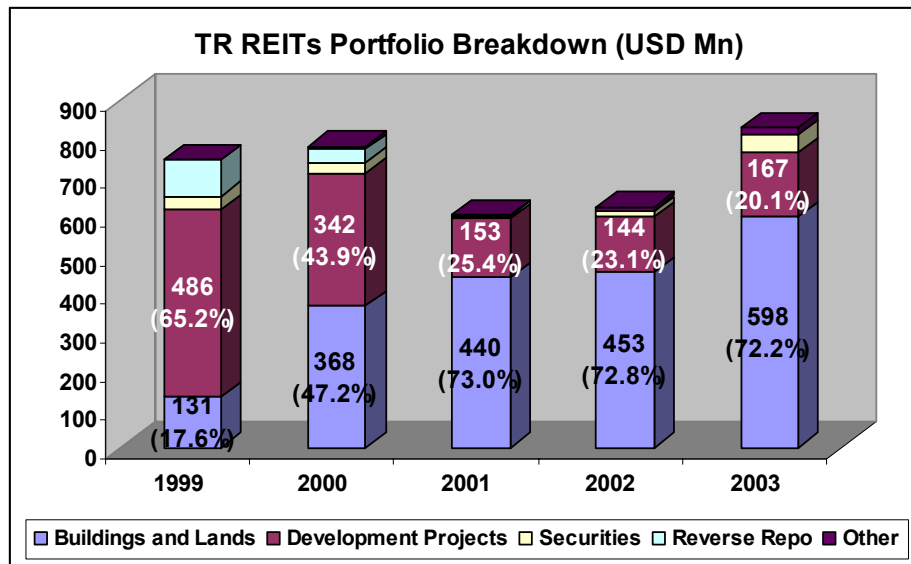


Taking a closer look at the portfolio structure of Turkish REITs, it is seen that almost three quarters of the portfolio consists of buildings and land followed by development projects with a share of 20.1%. The remaining 8% is a combination of liquid assets such as short term government securities and reverse repurchased bond contracts (repo).

Examining the portfolio trends since December 1999 reveals that the share of buildings and land has increased steeply from 1999 to 2001, more than quadrupling its share in the aggregate portfolio and stabilizing thereafter. This is mainly due to completion of ongoing projects in 2000 and 2001 and the reluctance of REIT managers to start new

projects due to the economic crisis, followed by a recession in the early 2000s. The REIT managers, who have preferred to maintain liquid portfolios and take advantage of the high real interest rates in those years, are once again filling up their development pipelines as the economic growth gains momentum.

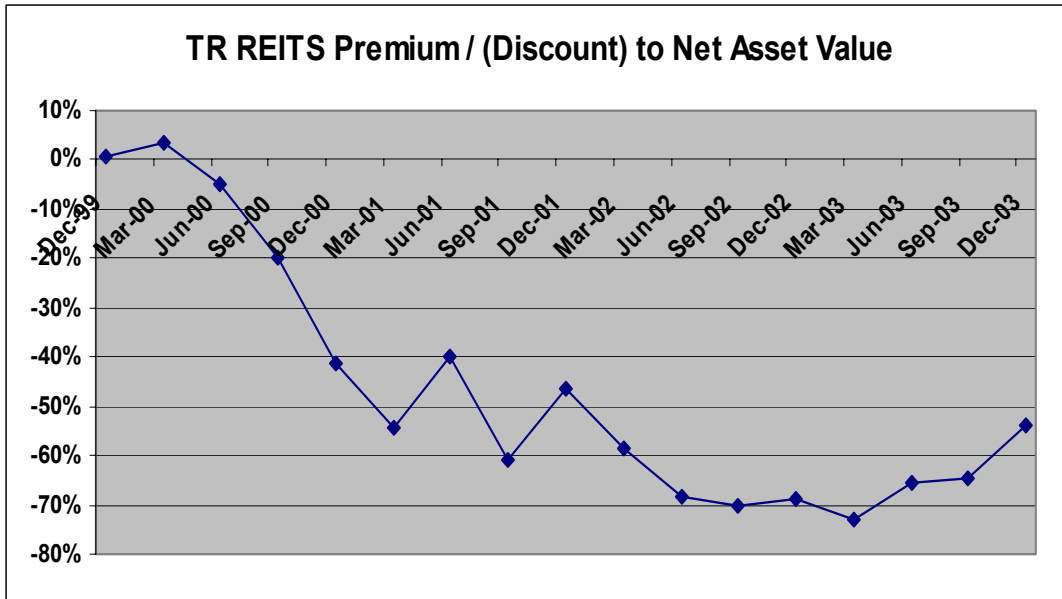
**Exhibit 4**



Source: Capital Markets Board Monthly Reports Table VII-2

Although the strategy of managing a liquid portfolio and using the income tax exemption to generate high returns has been very profitable for REITs and enabled them to come out of recession with increased net asset values, the performance of REIT stocks have not paralleled this positive trend. While the aggregate net asset value of Turkish REITs has increased from \$771 million to \$833 million between 1999 and 2003, the aggregate market value has decreased from \$776 million to \$384 million resulting in a 50% discount to net asset value from a slight premium in early 2000.

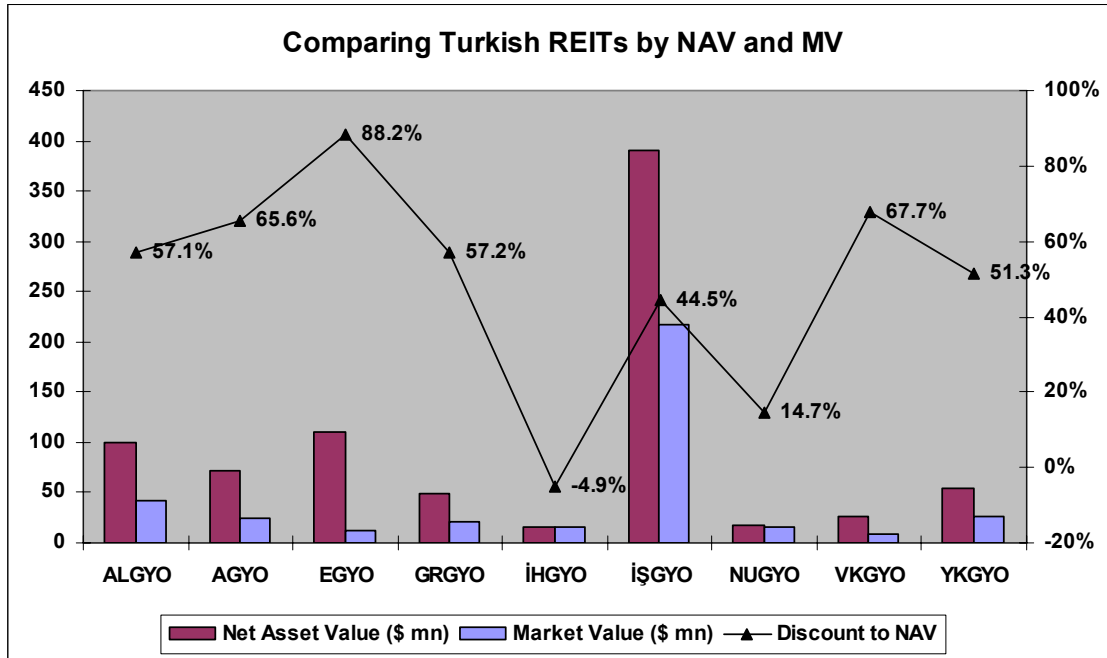
Exhibit 5



Source: Capital Markets Board Monthly Reports, Table VII-1

The discount to net asset value is not evenly distributed among the individual REITs. The following table shows the individual discount levels of the 9 listed REITs as of December 2003. The largest REIT, ISGYO trades at a discount of 44.5% significantly impacting the overall discount rate of the industry. Interestingly, EGYO and IHGYO, the two REITs with the most discount and premium to NAV respectively have both gone through severe financial difficulties stemming from their parent companies and their stocks have been closed to trading in 2001 for 13 months and 9 months respectively.

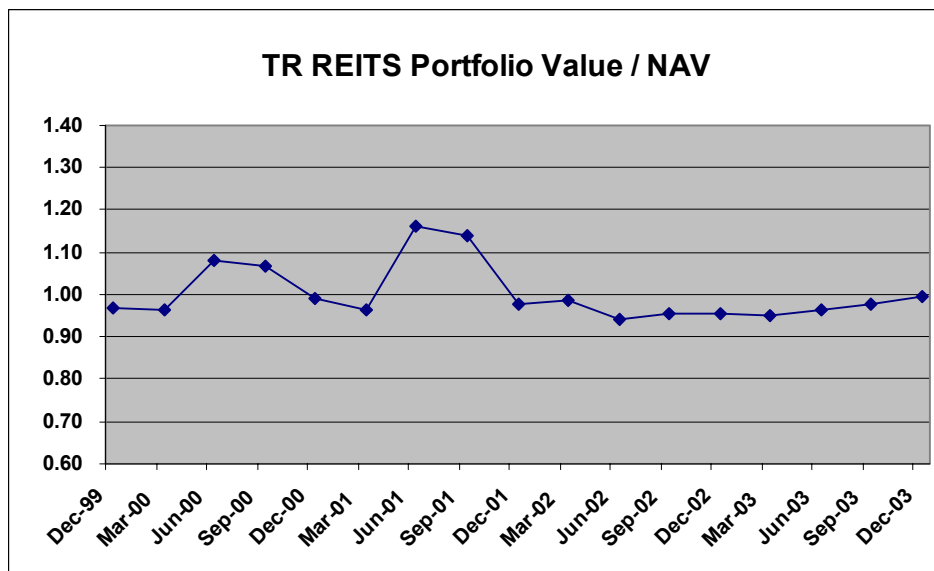
**Exhibit 6**



**Source: Capital Markets Board Monthly Report, December 2003, Table VII-1**

Over the study period, Turkish REITs have preferred to finance their portfolios with almost 100% equity. This ratio has slightly fluctuated during the 2001 crisis, however overall it has kept very stable. In the US, by contrast, the aggregate leverage of REITs in 2003 was 48%.

**Exhibit 7**



**Source: Capital Markets Board Monthly Reports, Table VII-2**

## PUTTING REITS IN PERSPECTIVE: THE ISTANBUL STOCK EXCHANGE

In Turkey there are 9 REITs traded on the ISE as of 30 December 2003, with combined market capitalization of \$380 million and a free float of \$156 million. This number is miniscule when compared with the combined market capitalization of the US REITs at \$224 billion. In the US, REITs have grown to have a 1.3% share of NYSE total market capitalization, whereas in Turkey, share of REITs in the aggregate market capitalization of ISE listed companies is less than 0.6%.

### Exhibit 8

#### Summary: Share of REITs in the ISE

30/12/ 2003	CASE OF TURKEY				CASE OF UNITED STATES		
	ISE (\$ mn)	REITs (\$ mn)	% of ISE	Rank*	NYSE	US REITS**	% of NYSE
Market Cap.	67,520.5	379.8	0.56%	21	17,300,000	224,211	1.30%
Free Float	16,361.5	155.7	0.95%	17			
Daily Trading Vol.	568.4	7.2	1.27%	12	9,692,300	1,200	0.01%

\* Ranking is based on a total of 33 sectors as defined by Ata Invest

\*\*Total market cap of 171 publicly traded REITs with total assets of \$400 billion and an average debt ratio of 41.8%.

Source: Ata Invest Market Indicators ([www.ataonline.com.tr](http://www.ataonline.com.tr))

Two partially offsetting factors contributing to the liquidity of Turkish REITs are the relatively high ratio of free float to market capitalization and the daily transaction volume. Turkish REITs on average have a free float of 41%, considerably higher than the ISE average of 24.23%. In addition, the average daily transaction volume of REITs is roughly 4.6% of their aggregate free float, whereas this ratio is only 3.5% indicating that each dollar invested in REITs is more liquid than the average dollar invested in the ISE. When these two factors are taken into consideration, REITs account for 1.27% of the daily turnover of the ISE, which is substantially higher than the same ratio in the US, where REITs only account for .01% of the daily transaction volume of NYSE. When ranked in terms of market capitalization REITs come out 21st of the 33 sectors, whereas in terms of daily transaction volume REITs are ranked 12<sup>th</sup>.



The above average liquidity is generally seen as investors as a positive factor deserving a premium known as the “liquidity premium”. However, Turkish REITs have not been able to reflect their success in portfolio management and liquidity into their stock performance. The following chart is the composit REIT / ISE100 index computed by dividing the REIT index into ISE100 index. As demonstrated in the following chart, the REIT index has considerably underperformed the ISE100 index.

**Exhibit 9**



**Source: Ata Invest Charting Tool**

In terms of US Dollars, the decline has been even steeper. The Turkish REIT Index quoted in USD has declined from 5.0 in December 1999 to 1.04 as of December 2003 showing an almost 80% decline in value.

**Exhibit 10**

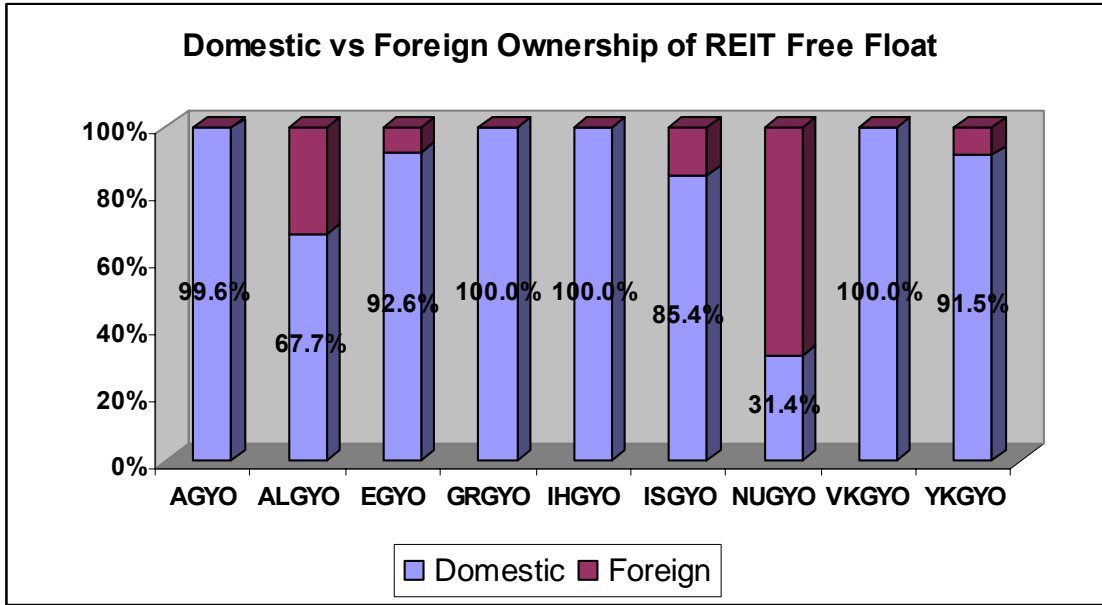


**Source: Ata Invest Charting Tool**

## **FOREIGN INVESTMENT IN TURKISH REITS**

It has often been stated in the Turkish media that REITs are an important means of attracting foreign capital interested in having exposure to the Turkish real estate market. Currently, there are no restrictions on foreign ownership of Turkish REIT stocks, furthermore the exchange rate risk is somewhat lower due to the common practice of using US Dollars as the transaction currency in the upper end of the real estate market, where REITs are concentrated. In order to measure the level of foreign ownership in Turkish REITs, the Takasbank records as of December 31, 2003 were used. Takasbank, the Central Securities Depository of Turkey is the only institution authorized to safe keep physical certificates of securities in Turkey. The institution monitors and publishes the breakdown of the number of shares held in custody by all financial institutions operating in Turkey. Two institutions, Garanti Yabancı and Citibank are currently authorized to keep custody of all the securities owned by foreign investors. In order to quantify the foreign share in the free float of Turkish REITs, the total number of shares held by these two institutions was considered to be the total foreign ownership for each REIT. The ratio of foreign owned shares to total number of registered shares are exhibited in the following table. 4 out of the 9 REITS have roughly 0% foreign ownership. The rest of the REITs have less than 1/3 foreign ownership with the exception of NUGYO, which stands out with close to 70% foreign ownership.

Exhibit 11



Source: [www.foreks.com](http://www.foreks.com)

One important caveat in the custody records is the fact that due to reasons beyond the scope of this paper, some Turkish individuals hold offshore wealth management accounts, through which they invest in Turkish securities. However, since the account is registered under a foreign institution, these accounts are also considered to be foreign funds and are held in custody with the two institutions mentioned earlier.

## **APPLICATION OF MODERN PORTFOLIO THEORY**

### **Hypothesis**

This study utilizes modern portfolio theory in order to shed more light into the discrepancy between the total returns of the Turkish REIT stocks in the stock exchange and the total returns of the underlying net asset values of the same companies. Various government incentives mentioned above have helped Turkish REITs to achieve a strong performance in their portfolio management and significantly increased the value of their portfolios through the turbulent times of the early 2000s. However, this superior performance has not been reflected into the stock performance of these companies due to the problems that stem from the legal framework and the perception of REITs as closed ended mutual funds rather than vertically integrated operating companies, which combine portfolio management capabilities with development capabilities.

### **Methodology**

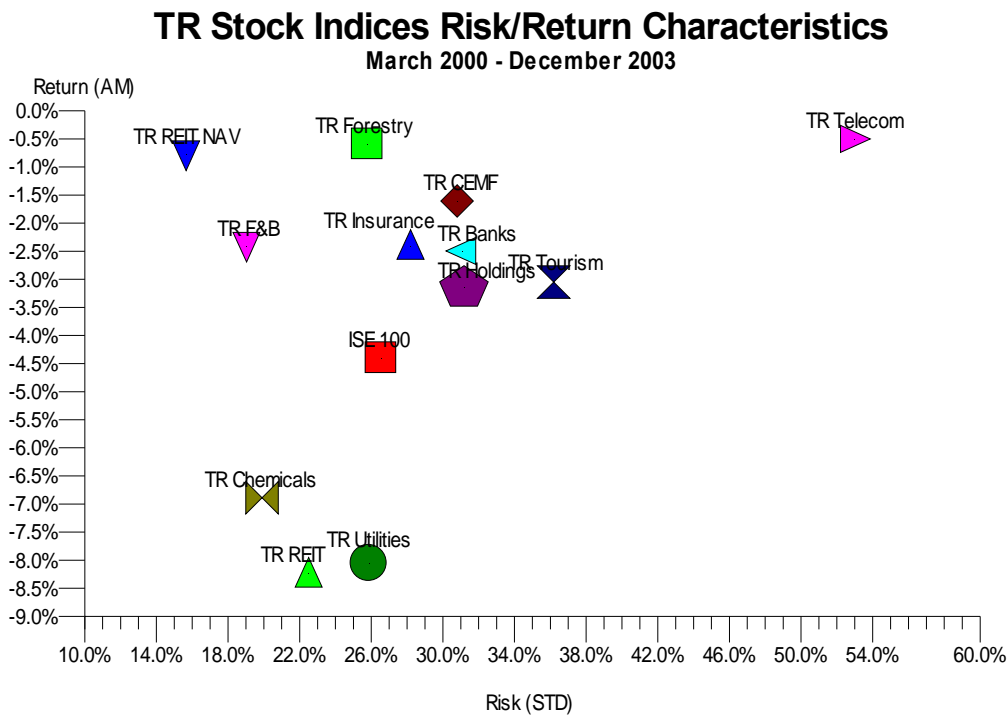
Ibbotson's Encorr portfolio management software was employed for the analysis. The first part of the exercise was based on a portfolio totally allocated among the major sectors of the Istanbul Stock Exchange. The aim of this part of the exercise was to determine the share of REITs in the optimal portfolio based on the actual returns, standard deviations and correlations over the study period.

The sectors included in the study were: telecommunications, banks, closed ended mutual funds, energy and utilities, tourism, chemicals, holding and investment companies, forestry and forest products, insurance and food and beverage. The sector indices as defined by the Istanbul Stock Exchange were used to measure quarterly returns for each sector. Data on index returns was supplied by a private data vendor, Foreks on a daily

basis and was converted into a quarterly basis. The period between January 2000 and December 2003 was chosen as the study period as REIT index was first introduced in January 2000. The returns were adjusted for inflation using the wholesale price index (WPI).

As a preliminary step, the risk and return characteristics of the individual sector indices were compared on a scatter gram. The ISE100 Index and the aggregate REIT net asset value returns were also placed on the graph as reference points. ISE100 Index is a value weighted index of 100 companies trading in the Istanbul Stock Exchange based on criteria including market capitalization and trading volume.<sup>30</sup>

**Exhibit 12**



As demonstrated in the scatter gram, Turkish REIT stocks generated quarterly inflation adjusted returns of -8.3%, the lowest among all sectors over the study period. In other

<sup>30</sup> See <http://www.imkb.gov.tr/endeksler/hissex.htm> for complete inclusion criteria and calculation methods of ISE 100 Index.

words, the REIT stocks underperformed the ISE100 Index by 4.02% per quarter. The standard deviation of returns was 22.5%.

Ironically, in terms of underlying assets, REITs achieved some of the best returns of all sectors over the study period with the lowest standard deviation. The average quarterly return was -0.82% with a standard deviation of 15.6%. In other words, in terms of their net asset values, REITs outperformed the ISE100 Index by 3.78% on a quarterly basis.

In the next step, Markowitz’s theory of “efficient frontier” was used to measure the impact of the discrepancy between the risk and return characteristics of the REIT stocks and of the net asset values of those REITs.

A key step in constructing the “efficient portfolio” is computing the correlations between the assets considered for the portfolio. Accordingly, the following correlation matrix was prepared to reveal the correlations among indices.

**Exhibit 13**  
**TR Indices Correlation Matrix**

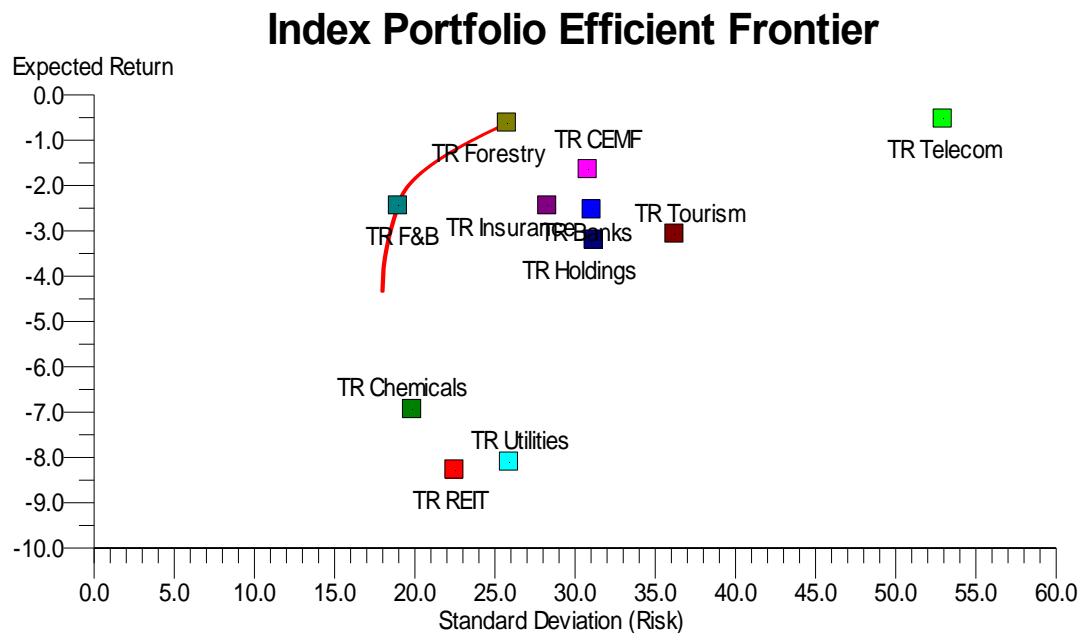
	N Periods	ISE 100	REIT	REIT NAV	Telecom	Banks	CEMF	Utilities	Tourism	Chemicals	Holdings	Forestry	Insurance	F&B
ISE 100	16	1.00	0.94	0.53	0.86	0.97	0.90	0.88	0.76	0.88	0.96	0.85	0.94	0.81
REIT	16	0.94	1.00	0.42	0.78	0.92	0.87	0.76	0.68	0.84	0.89	0.89	0.92	0.76
REIT NAV	16	0.53	0.42	1.00	0.77	0.46	0.51	0.59	0.57	0.44	0.59	0.40	0.52	0.41
Telecom	16	0.86	0.78	0.77	1.00	0.75	0.81	0.84	0.77	0.76	0.89	0.70	0.83	0.60
Banks	16	0.97	0.92	0.46	0.75	1.00	0.89	0.83	0.74	0.83	0.90	0.82	0.90	0.81
CEMF	16	0.90	0.87	0.51	0.81	0.89	1.00	0.78	0.74	0.70	0.83	0.77	0.88	0.69
Utilities	16	0.88	0.76	0.59	0.84	0.83	0.78	1.00	0.67	0.83	0.81	0.70	0.75	0.68
Tourism	16	0.76	0.68	0.57	0.77	0.74	0.74	0.67	1.00	0.60	0.77	0.66	0.67	0.61
Chemicals	16	0.88	0.84	0.44	0.76	0.83	0.70	0.83	0.60	1.00	0.80	0.65	0.83	0.72
Holdings	16	0.96	0.89	0.59	0.89	0.90	0.83	0.81	0.77	0.80	1.00	0.84	0.93	0.74
Forestry	16	0.85	0.89	0.40	0.70	0.82	0.77	0.70	0.66	0.65	0.84	1.00	0.80	0.77
Insurance	16	0.94	0.92	0.52	0.83	0.90	0.88	0.75	0.67	0.83	0.93	0.80	1.00	0.71
F&B	16	0.81	0.76	0.41	0.60	0.81	0.69	0.68	0.61	0.72	0.74	0.77	0.71	1.00

One of the immediate observations regarding the correlation matrix was the low correlation between the REIT stocks and their net asset values. As highlighted in the table, the REIT stocks demonstrated a high correlation with the ISE100 Index of 0.94

whereas REIT net asset values demonstrated a much lower correlation of 0.53. Moreover, REIT stocks also had a low correlation with their net asset values of merely 0.42.

In the next step, Ibbotson software was used to create the Markowitz efficient frontier. Only the sector indices including REITs were used as the asset classes subject to this analysis. The results were as follows:

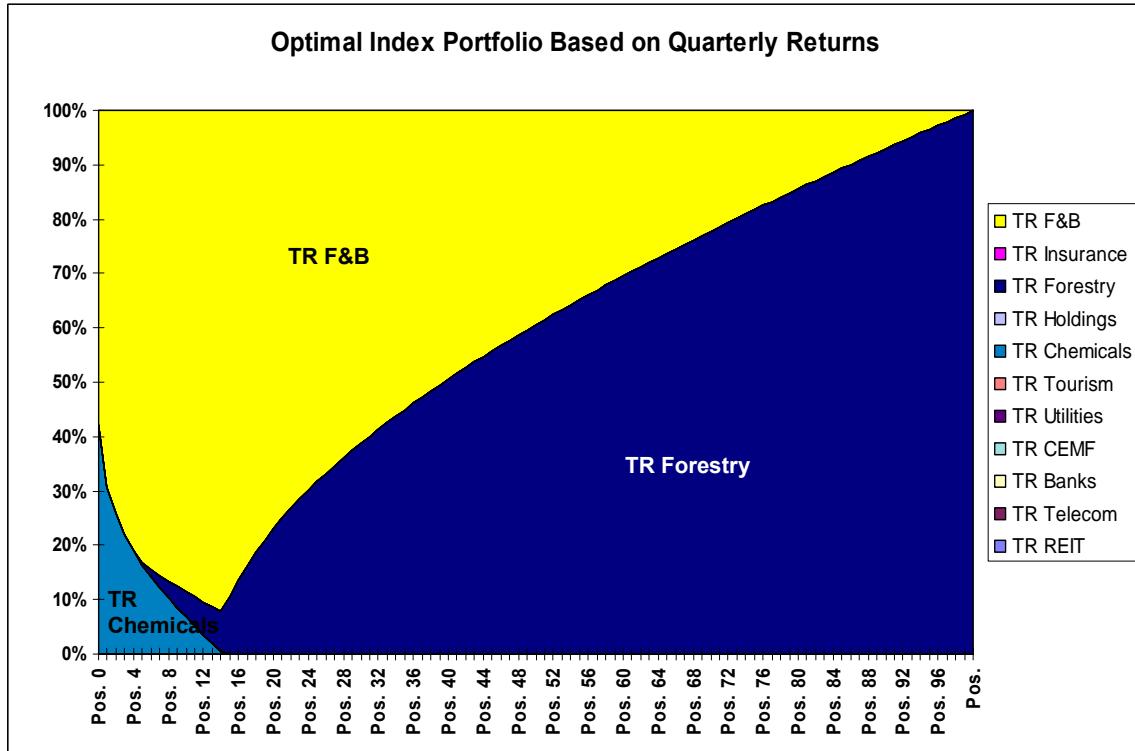
**Exhibit 14**



Reflecting the low expected return and high correlation with the other stock indices, REIT stocks did not come up as an attractive addition to the index portfolio. The following area graph demonstrates the optimum portfolio distribution at various positions on the risk and return spectrum. As exhibited in the area graph, at each risk and return position REITs were dominated by other sector indices and consequently were not included in the optimal risky portfolio. Surprisingly, only three sectors out of the 11 included in the study dominated the optimal portfolio namely food and beverage, and

chemicals at the low risk end of the spectrum and forestry at the high risk end of the spectrum.

**Exhibit 15**



**Replacing REIT Index Returns with REIT NAV Returns**

In the next part of the exercise, REIT index returns were substituted with the aggregate REIT net asset value returns in order to quantify what the share of REITs would have been if the market fully reflected the value of the REITs’ net assets into the stock prices.

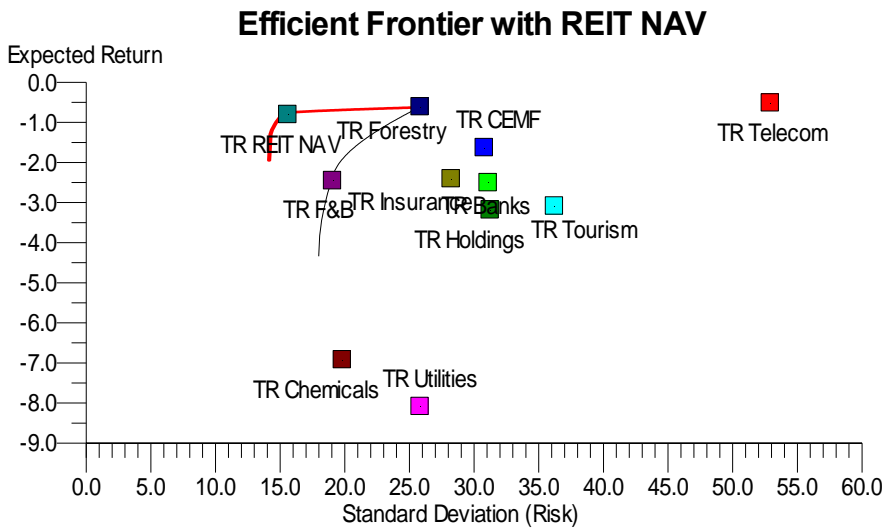
The net asset value data for individual REITs was obtained from Capital Markets Board Monthly Reports and was later aggregated and converted into a quarterly basis.

When the efficient frontier was recomputed with the REIT net asset value returns, it was seen that due to high returns relative to other indices and low correlation with the other sectors, the REITs added significant value to the efficient frontier moving the frontier



upward and to the left. Specifically, the addition of REITs increased the expected return of the portfolio from -4.34% to -1.95% and decreased the standard deviation from 17.98% to 14.14% at the lowest risk position. At the median position, (Position 50), the addition of REITs increased expected return from -1.35% to -0.69% and decreased standard deviation from 21.87% to 19.95%.

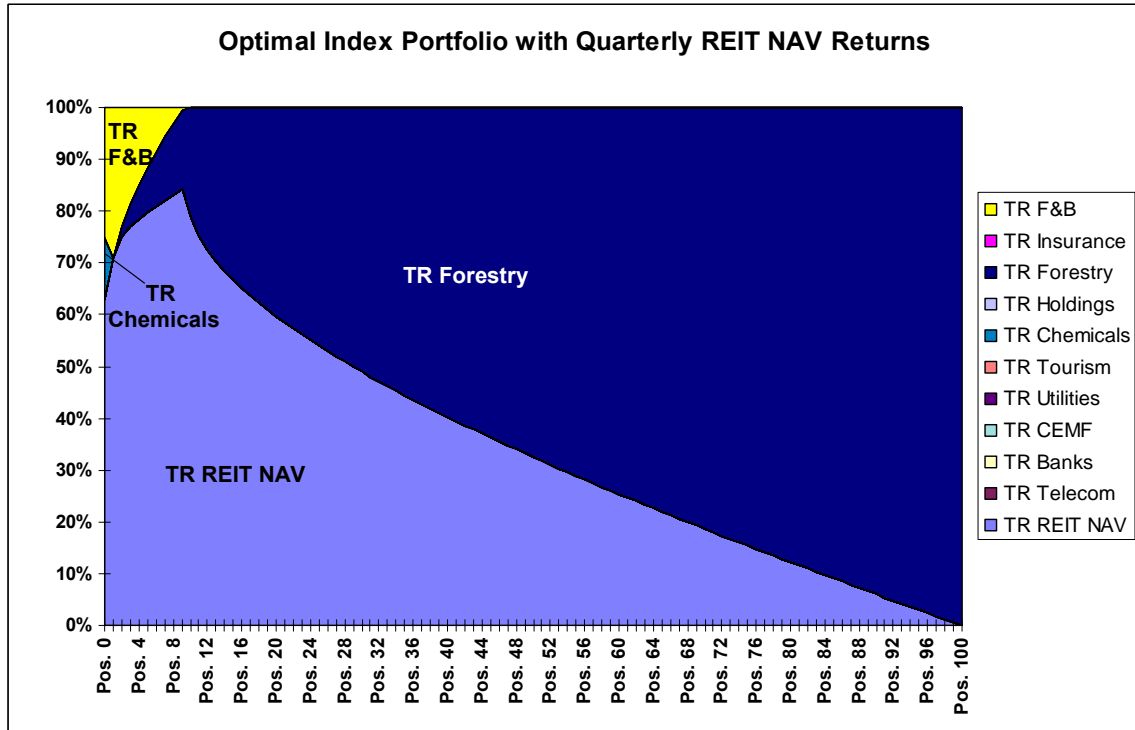
**Exhibit 16**



As can be seen in the following area graph, REITs added most value to the optimum portfolio at the low risk level positions having a share of up to 84% of the optimal stock portfolio and gradually decreasing at higher risk and return levels. Specifically, at position 0, where the expected return of the portfolio was -1.95% with a standard deviation of 14.14%, REITs had a 63% share in the portfolio. The share of REITs reached 84%, its maximum, at position 9, where the portfolio had an expected return of -.80% with a standard deviation of 15.19%. Beyond that point, the share of REITs was gradually replaced by forestry up to point 100, where forestry had a share of 100% of the

optimal portfolio. At this point, the portfolio had an expected return of -0.63% with a standard deviation of 25.76%.

**Exhibit 17**



### Exploring The Market’s Implied Expected Return from REITs

The final step of the sector index analysis aimed to identify the market’s implied required rate of return from REITs assuming that the correlations among sector indices would remain constant and the expected returns from all sectors except REITs would remain the same. In other words, this analysis aimed to find out what expected rate of return would justify the current 0.95% share of REITs in the total free float of ISE assuming that the average investor would keep a median risk / return portfolio.

In order to solve for the implied expected return, the Ibbotson software was used in a reverse manner. The optimal portfolio constructed in Step 1 was kept constant except for

the expected return of the REIT Index. The expected return of the REIT Index was manipulated to find the exact rate of return, which justifies a 0.95% allocation to the REIT Index at position 50 of the optimal portfolio.

**Exhibit 18**  
**Portfolio Statistics**

<b>Position 50</b>	<b>Share in Portfolio (%)</b>	<b>Expected Return</b>	<b>Standard Deviation</b>	<b>ISE100 Relative Return</b>
<b>TR REIT</b>	0.94	-1.72	22.5	2.84
<b>TR Telecom</b>	0	-0.53	52.9	4.08
<b>TR Banks</b>	0	-2.54	31.04	1.98
<b>TR CEMF</b>	0	-1.64	30.74	2.92
<b>TR Utilities</b>	0	-8.11	25.81	(3.85)
<b>TR Tourism</b>	0	-3.1	36.17	1.39
<b>TR Chemicals</b>	0	-6.93	19.85	(2.62)
<b>TR Holdings</b>	0	-3.2	31.18	1.29
<b>TR Forestry</b>	60.19	-0.63	25.76	3.98
<b>TR Insurance</b>	0	-2.43	28.2	2.09
<b>TR F&amp;B</b>	38.87	-2.45	18.99	2.07
<b>Optimal Portfolio</b>		<b>-1.35%</b>	<b>21.87</b>	<b>4.62</b>
<b>ISE 100</b>		<b>-4.43</b>	<b>26.54</b>	

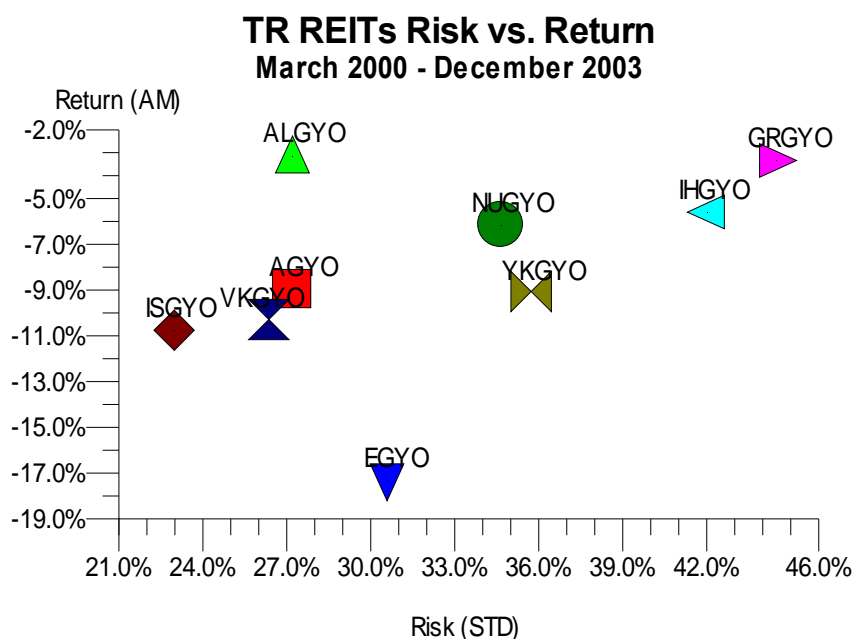
As summarized in the following table, a -1.72% expected inflation adjusted return was computed to justify a 0.94% share in the market portfolio.

**Constructing the Optimal Reit Portfolio**

In this part of the exercise all REITs traded on the Istanbul Stock Exchange were included as potential assets for the optimal REIT portfolio. The methodology used for the optimal index portfolio was also applied to determine the optimal REIT portfolio. Again, daily data obtained from Foreks was first converted into a quarterly basis, and then inflation adjusted in order to be used for the analysis.

As in the first part, the risk and return profiles of individuals were computed and plotted on a scatter gram.

**Exhibit 19**



The REIT stocks that stood out in this step were Alarko REIT (ALGYO), which provided the highest expected return at a relatively low risk; and Is REIT (ISGYO), which marked the lowest risk end of the spectrum with a standard deviation of 22.98%.

As the second step, the correlations among the 9 REITs and the REIT index were computed and the following correlation matrix was constructed.

**Exhibit 20**

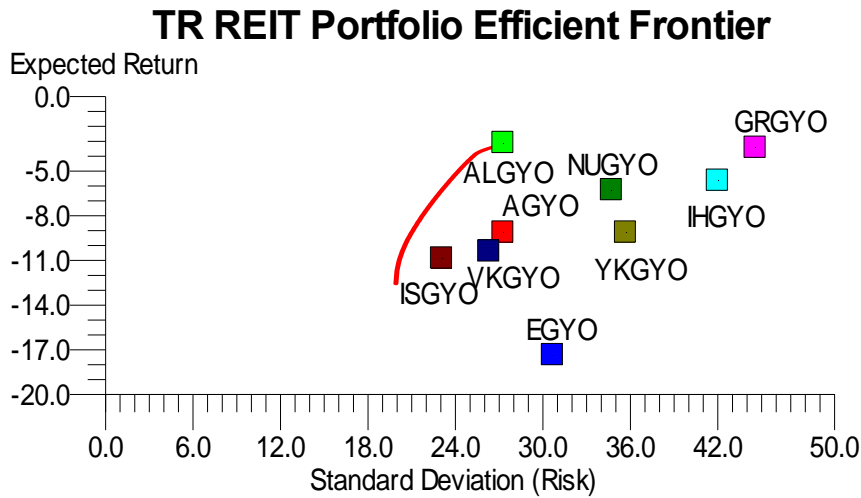
**TR REITs Correlation Matrix**

	N Periods	TR REIT	AGYO	ALGYO	EGYO	GRGYO	IHGYO	ISGYO	NUGYO	VKGYO	YKGYO
TR REIT	16	1.00	0.88	0.74	0.42	0.78	0.68	0.91	0.79	0.90	0.82
AGYO	8	0.88	1.00	0.75	0.53	0.85	0.36	0.88	0.85	0.77	0.71
ALGYO	16	0.74	0.75	1.00	0.38	0.74	0.52	0.66	0.41	0.60	0.73
EGYO	16	0.42	0.53	0.38	1.00	0.17	0.07	0.19	0.39	0.29	0.56
GRGYO	16	0.78	0.85	0.74	0.17	1.00	0.72	0.75	0.42	0.76	0.72
IHGYO	16	0.68	0.36	0.52	0.07	0.72	1.00	0.63	0.42	0.63	0.44
ISGYO	16	0.91	0.88	0.66	0.19	0.75	0.63	1.00	0.70	0.77	0.63
NUGYO	16	0.79	0.85	0.41	0.39	0.42	0.42	0.70	1.00	0.68	0.57
VKGYO	16	0.90	0.77	0.60	0.29	0.76	0.63	0.77	0.68	1.00	0.81
YKGYO	16	0.82	0.71	0.73	0.56	0.72	0.44	0.63	0.57	0.81	1.00

As highlighted in the matrix, ISGYO, the largest listed REIT, demonstrated the highest correlation with the REIT Index. On the other hand EGS REIT (EGYO), a REIT that went through serious financial problems over the recent years demonstrated the lowest correlation both with the REIT Index and the rest of the REIT stocks.

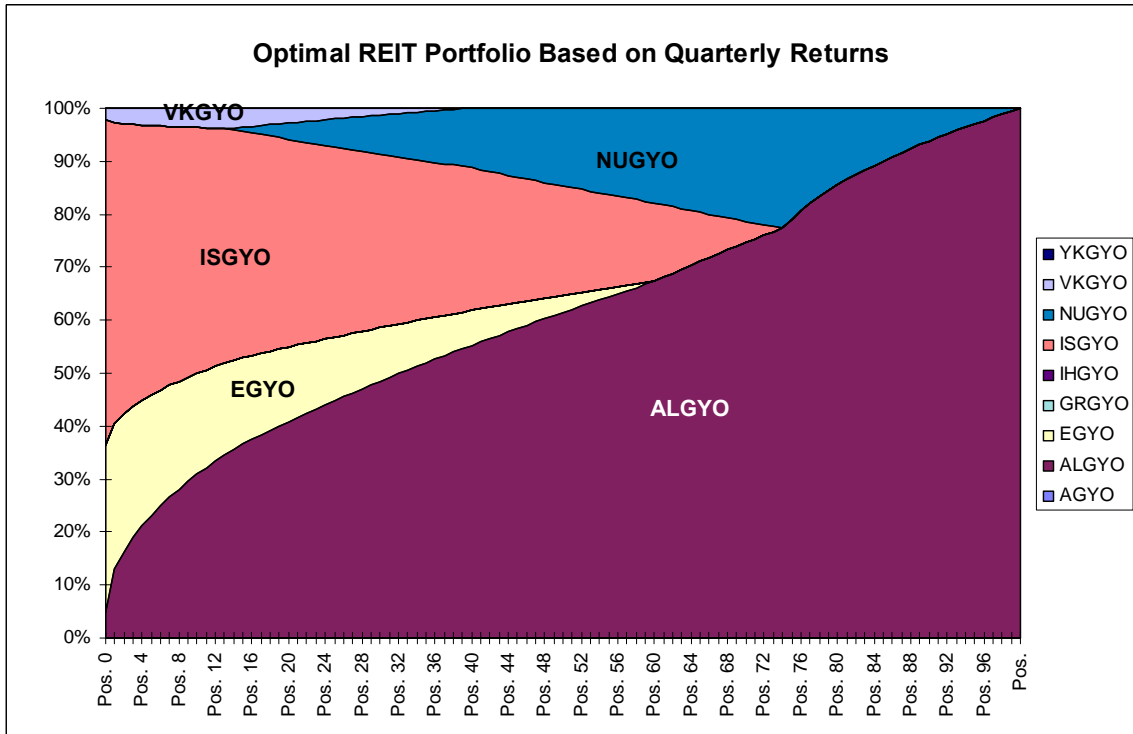
In the next step, the following efficient frontier was constructed using Ibbotson software.

**Exhibit 21**



Not surprisingly, ALGYO stood out as the only REIT stock positioned on the efficient frontier. At the median position, the portfolio provided inflation adjusted expected return of -5.71%, or -1.34% relative to the ISE100 Index. The standard deviation of this position was 23.56%. The optimal portfolio outperformed the REIT Index by 2.79% on a quarterly basis with a roughly 1% increase in standard deviation.

**Exhibit 22**

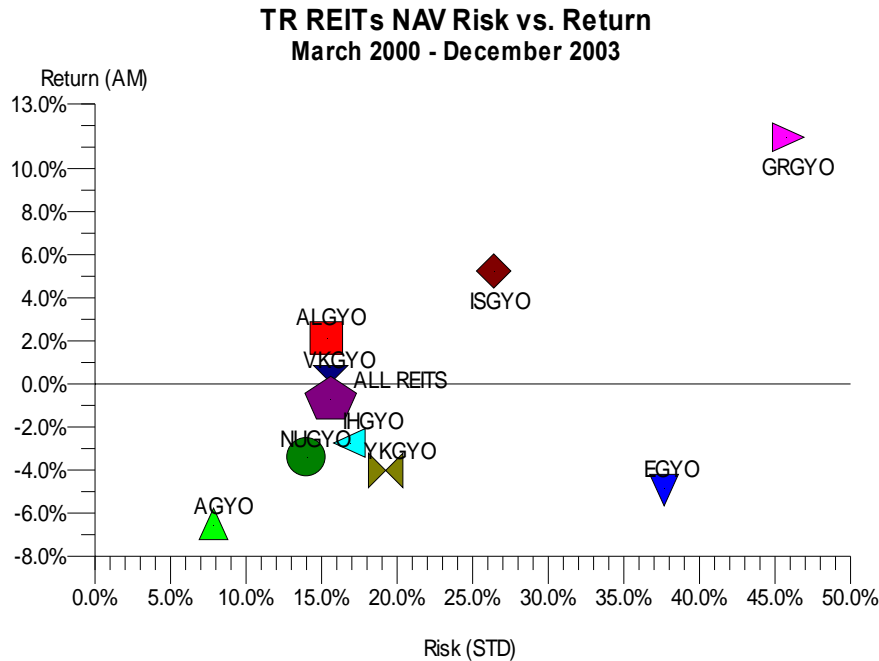


At the median position, ALGYO had a 61.5% share of the optimal portfolio followed by ISGYO and NUGYO at 20.7% and 14.6% respectively. The share of ALGYO increased gradually toward the high risk end of the spectrum reaching 100% at position 100. At the low risk end of the spectrum ISGYO stood out with the largest share of the portfolio at 61.3%, followed by EGYO at 31.5%. The expected return of this position was -12.57% with a standard deviation of 19.92%. Garanti REIT (GRGYO), Atakule REIT (AGYO), Ihlas REIT (IHGYO) and Yapi Kredi Koray REIT (YKGYO) were not included in the optimum risky portfolio at any risk and return position.

## Replacing Stock Returns with NAV Returns

In this part of the study, the REIT stock returns were substituted with the net asset values of the same companies<sup>31</sup> in order to construct the optimal portfolio based on the implied intrinsic values of Turkish REITs.

### Exhibit 23



The risk return scatter gram at the NAV level revealed the most regular pattern of risk increasing parallel to expected return among all steps of the analysis. The outlier to this pattern was EGYO, which exhibited a very high standard deviation relative to expected return. This irregularity can be attributed to the financial distress that the company experienced due to its parent company. GRGYO and AGYO marked the highest and lowest risk/return points on the spectrum respectively.

The correlation matrix constructed using the NAV returns revealed a wide range of correlations ranging between -0.33 and 0.95, which indicates high potential

<sup>31</sup> Net asset value data was compiled from Capital Markets Board monthly reports.

diversification benefits from constructing a multi-company REIT portfolio. Not surprisingly, ISGYO the dominant firm in the industry showed the highest correlation with the aggregate REIT NAV returns at 0.95.

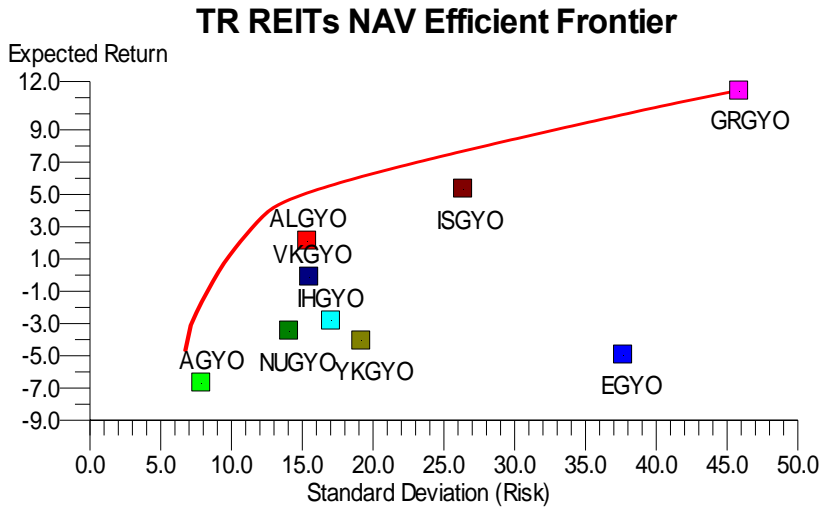
**Exhibit 24**

**TR REITs NAV Correlation Matrix**

	N Periods	ALGYO	AGYO	EGYO	GRGYO	IHGYO	ISGYO	NUGYO	VKGYO	YKGYO	ALL REITS
ALGYO	16	1.00	-0.08	-0.33	-0.15	0.27	-0.13	-0.29	0.08	0.74	-0.08
AGYO	7	-0.08	1.00	0.80	0.86	0.31	0.71	0.75	0.86	0.44	0.85
EGYO	16	-0.33	0.80	1.00	0.30	-0.19	0.87	0.70	0.79	0.03	0.94
GRGYO	16	-0.15	0.86	0.30	1.00	0.32	0.39	0.69	0.35	-0.30	0.32
IHGYO	16	0.27	0.31	-0.19	0.32	1.00	-0.21	0.15	-0.09	0.09	-0.16
ISGYO	16	-0.13	0.71	0.87	0.39	-0.21	1.00	0.64	0.82	0.10	0.95
NUGYO	16	-0.29	0.75	0.70	0.69	0.15	0.64	1.00	0.65	-0.03	0.67
VKGYO	16	0.08	0.86	0.79	0.35	-0.09	0.82	0.65	1.00	0.21	0.89
YKGYO	16	0.74	0.44	0.03	-0.30	0.09	0.10	-0.03	0.21	1.00	0.23
ALL REITS	16	-0.08	0.85	0.94	0.32	-0.16	0.95	0.67	0.89	0.23	1.00

The same methodology as the earlier steps was used to construct the efficient frontier. As expected GRGYO and AGYO dominated the highest and lowest risk preference positions on the spectrum.

**Exhibit 25**

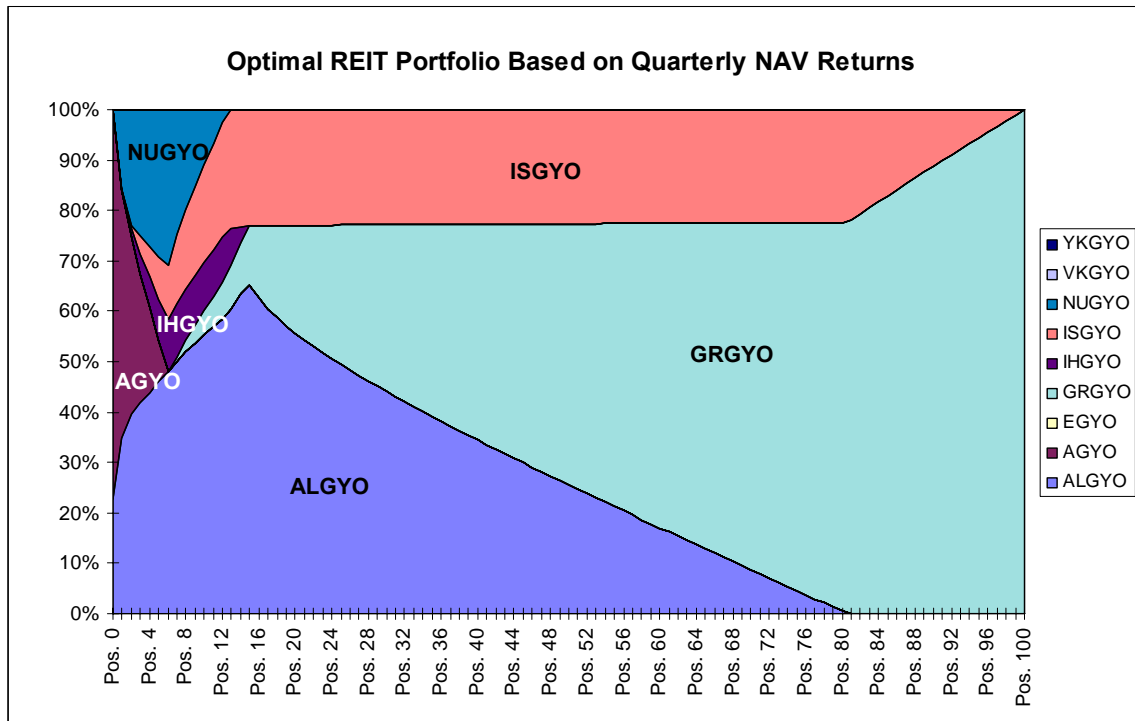


At the median position, the portfolio provided inflation adjusted expected return of 7.66% which was substantially higher than the -5.71% expected return of the optimal median



risk REIT portfolio constructed with the actual stock returns. The standard deviation of this position was 26.25%, which was slightly higher than the 23.56% standard deviation of the REIT portfolio constructed with the actual stock returns. The median portfolio consisted of GRGYO, ALGYO and ISGYO with 51.8%, 25.5% and 22.7% shares respectively.

**Exhibit 26**



Although the share of GRGYO decreased gradually toward the low risk end of the spectrum and reached 0% at position 6, overall it had a large share in all moderate to high risk portfolios. ALGYO and ISGYO also accounted for large percentages of moderate risk portfolios. At the low risk end of the spectrum AGYO stood out with the largest share of the portfolio at 77.2%, followed by ALGYO at 22.7%. All other REITs were excluded from the lowest risk optimal portfolio, which generated an expected real return

of -4.67% with a standard deviation of 6.74%. EGYO, VKGYO and YKGYO were not included in any optimal portfolio along the risk return spectrum.

## **DISCUSSION OF RESULTS**

An important point that requires clarification is the fact that in most steps of the analysis, the median risk optimal portfolio as well as most indices and REIT stocks generated negative inflation adjusted expected returns. Over the long run, it is irrational to invest in portfolios with negative expected real returns. However, the study period coincided with a severe financial crisis in Turkey, which caused the ISE100 index to decrease on average 4.43% on a quarterly basis. In USD terms, the ISE index decreased from \$0.032 to \$0.013, a 59% decline between January 1, 2000 and December 31, 2004. Similarly, all sector indices demonstrated substantial declines reflecting the deteriorating fundamentals of the listed companies. That is the main reason that the ISE100 relative returns were computed in the analysis in addition to the real expected returns. If the time period is extended back to 1991, over the 13 years ISE100 index has produced average quarterly inflation adjusted returns of 4.2%. With the simplifying assumption that the relative returns among sector indices observed over the study period are perpetual, the true expected returns may be computed relative to the long run performance of the ISE100 index.

The other point that requires further discussion is the meaning of appraisal based net asset value for computing the intrinsic values of REITs. In the US, a generally accepted model for the valuation of REITs is the Gordon Growth Model, which is based on dividends as the ultimate cash flows to the REIT investor. Given that the REITs are

obliged to pay out a minimum of 90% of their income as dividends, the model provides a practical and fairly accurate way of valuing REIT stocks. However in the case of Turkey, there is obligation for REITs to pay dividends, and over the study period dividend payout has been negligible in the REIT industry. Therefore, the value created by the REIT management has been directly reflected in the NAV of the company. Accordingly, a change in NAV is considered as the main indicator of the value generation capacity of the REIT as a company. For REITs with more static portfolios, such as VKGYO, the changes in NAV may also be used as a proxy to determine the change in the value of private real estate; however for companies such as ALGYO and YKGYO where development is a significant component of the firm's operations, this is not possible.

## **CONCLUSION:**

REITs are the most effective means of securitizing real estate in Turkey. Corporations and banks can use REITs as a means of improving their balance sheets, making their assets more liquid. Even the government may channel its extensive land holdings effectively into the economy through REITS.

In order to grow to a scale which will allow them to fulfill the above mentioned roles, REITs have to be provided with sufficient incentives especially in terms of taxes.

Their current exemption from corporation tax and income tax are important incentives, however the limited growth of the sector and unsatisfactory stock performance indicate that the incentives are yet insufficient to ensure healthy growth of the REIT industry in Turkey. The main tax disadvantage that REITs face is the value added tax. Currently, all real estate transactions except housing units with an area of less than 150 square meters are taxed at 18%, and REITs pay this tax based on the appraised values. Being long term investors investing in longer term/larger projects, REITs usually have to carry this burden for extended periods of time, which increase their costs considerably, damaging their competitiveness. Similarly, REITs are liable to pay real estate taxes for their holdings based on appraised values, which is a significant competitive disadvantage against traditional developers and investors, who significantly understate the values of their holdings.

Existence of a professional and independent appraisal industry is vital for increasing the credibility of the industry from the perspective of investors. Currently two appraisal companies are authorized by the CMB, however the legal structure and framework of the

appraisal process is still in process. The recent foundation of the Association of Valuation Experts is expected to address the problems of the sector and accelerate its development. In order to achieve the goal to create a well planned built environment, REITs have to develop large scale projects; however an important hurdle to overcome is the scarcity of land supply with required infrastructure. Turkish Government is the largest landlord holding 54% of the total land of Turkey. Therefore, its efficiency and willingness to contribute this land for economic development is a key condition for REITs to overcome the land supply problem. Due to the scarcity of land supply, on average, the cost of land currently accounts for 25-30% of total development budgets.<sup>32</sup>

The small size and high volatility of Turkish capital markets and the high cost of capital is a substantial problem that the REITs should overcome. The adverse capital market conditions make it impossible for REITs to raise debt or equity at a reasonable cost as opportunities arise, therefore REITs are much eager to hold on to their liquid resources rather than actively filling their pipelines and fulfilling their primary function of increasing their share in the financing of real estate development in Turkey. The introduction of mortgage system is expected to fuel accelerated growth of the industry through increased availability of capital from both foreign and domestic investors.

However, none of the above conditions or problems fully explains the 50% decline that the REIT stocks suffered over the past 4 years despite an 8% increase in NAV, which has resulted in a deep discount of 50% to NAV. Although whether the current discount level is going to be sustained is yet to be seen, the investors' perception of REITs as closed end mutual funds rather than operating companies with significant competitive advantages is the most convincing explanation for the current situation.

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<sup>32</sup> Ata Invest, REIT Industry Report, 17 February 2004, p.3

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