Testing of Capital Assets Pricing Model (CAPM) in Cement Sector Power Generation and Distribution Sector in Turkey

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Testing of Capital Assets Pricing Model (CAPM) in Cement Sector & Power Generation and Distribution Sector in Turkey

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Abstract:

This study is conducted to investigate the CAPM (Capital Asset Pricing Model) in Turkey based on the sources of information from Istanbul Stock exchange emphasizing only on the Cement Sector and Power Generation & Distribution Sector. The data range is from 1st January 2012 to 31st December 2013. In the Cement Sector we get data for 10 companies and in the Power Generation and Distribution we get data for 10 companies. The consequences are only substantial for only mention stocks and only for few years.

This paper shows the relationship between the Coefficients Beta (β) and Capital Asset Pricing Model (CAPM) of the Cement Sector and Power Generation and Distribution Sector in Turkey and then get regression analysis of Coefficients Beta (β) and Capital Asset Pricing Model (CAPM) both of the sector shows In-significant result, which means the Capital Assets Pricing Model (CAPM) is not applicable in Turkey Cement Sector and Power Generation and Distribution Sector.

Keywords: Capital Asset Pricing Model (CAPM), Coefficients Beta (β), Regression

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Introduction:

The Capital Assets Pricing Model (CAPM) forms on the model of portfolio choice established by Harry Markowitz (1959). In Markowitz's model, an investor selects a portfolio at time t that produces a stochastic return at time t. The Capital Asset Pricing Model (CAPM) introduced by Sharpe (1964) and Lintner (1965) is still the most broadly used attitude to comparative asset evaluation. The theory forecasts that the expected return on an asset above the risk-free rate is relative to non-diversifiable risk, which is measured by the covariance of asset return with a portfolio composed of all standing assets, called the market portfolio.

The Capital Assets Pricing Model (CAPM) assumes investors are risk averse and, when choosing among portfolios, they care only about the mean and variance of their one-period investment return. As a result, investors choose "mean-variance-efficient" portfolios, in the sense that the portfolios: (1) Minimize the risk of portfolio return, given expected return, and (2) Maximize expected return, given risk. Thus, the Markowitz approach is often called a "mean-variance model." The portfolio model provides an algebraic condition on asset weights in mean- variance- efficient portfolios. The Capital Assets Pricing Model (CAPM) turns this numerical statement into a testable forecast about the relation between variance and expected return by identifying a portfolio that must be capable if asset prices are to clear the market of all assets. Sharpe (1964) and Lintner (1965) add two key conventions to the Markowitz model to identify a portfolio that must be mean-variance-efficient.

The Capital Asset Pricing Models (CAPM) define a directly relationship between expected return and risk in the securities market under the theory that ambiguous future returns of securities can be described in terms of instants of their probability circulations. The association between expected return and risk is the vital theme of the asset pricing theory. The model is mostly use to calculate the required rate of return of any investment or portfolio

because beta the market risk also include, and very useful to get approximately required rate of return. To calculate the Capital Asset Pricing Models CAPM, the standard for the risk free rate RF, is taken as Istanbul (Turkey) Interbank Offer Rate (IIBOR) equivalent to the applicable yearly time periods. For estimating market return RM, changes in the ISE-100 index for each applicable time period is used.

The Capital Asset Pricing Model (CAPM) is a very useful technique in global investing community for calculating the required return of risky asset. The Capital Asset Pricing Model (CAPM) is determined the value of an investor's financial assets when the performance of all investors in the stock market is engaged into consideration.

Purpose of this study to evaluate the best sector for investing, Cement Sector or Power Generation and Distribution Sector. To evaluate the best investing sector use the model (CAPM) which tells required rate of return of each sector. Firstly calculate the market risk Beta (β) daily bases and after this yearly bases. So the Capital Assets Pricing Model (CAPM) is the best model to calculate the required rate of return.

In this paper, we evaluate that the Capital Assets Pricing Model (CAPM) is best for calculating the expected future return of above mention two sectors. The result arrived at through data analysis might lead to useful references about how and which degree of CAPM can be used as tools for forecasting stock returns and helping to investment decisions, in general, and particularly for the Cement Sector and the Power Generation and Distribution Sector companies in Turkey.

Literature Review:

The Capital Assets Pricing Model (CAPM) established by Sharpe (1964), Lintner (1965) and Mossini (1965) builds upon the “Portfolio Theory” presented by Harry Markowitz (1959). The Capital Assets Pricing Model (CAPM) assistances the basis for significant the required rate of return on all risky assets. The Capital Assets Pricing Model (CAPM) theory is made upon the expectations of the Portfolio Theory plus some complementary ones. The major

factor that allowed Portfolio Theory to develop into the Capital Assets Pricing Model (CAPM) is the concept of the risk free asset.

It is mostly agreed that investors demand a higher expected return for investing in riskier projects, or securities. Investors expect the risk of basic securities with the help of different models. The Capital Assets Pricing Model (CAPM) is mostly used by the finance managers or investors in finding the risk of the investment and to expect the expected return of the stock (Jagannathan & Wang, 1993). The Capital Assets Pricing Model (CAPM) like any other models is based on certain assumptions; (Van Horne, 2006). Unsystematic risk can be avoided by the portfolio diversification; however investors are satisfied for the systematic risk of basic security which cannot be expanded away; higher the systematic risk higher will be the return the investors expect (Lau & Quay, 1974). Beta (β) is the measure of systematic risk and having Positive relationship with return.

The Capital Assets Pricing Model (CAPM) believers; investors need to be satisfied in two ways: firstly for time value of money and secondly risk related with the security. First half of formula denotes risk free return (RF) that compensates the investors for placing money in any investment over a period of time. The other half of the formula represents [β (Rm-Rf)] risk premium for comportment additional risk. The Capital Assets Pricing Model (CAPM) is the most widely used model for finding the investors return. However results have not always supported the model. Since the development of the Capital Assets Pricing Model (CAPM) number of studies conducted for testing the validity of the model. The Capital Assets Pricing Model (CAMP) is based on certain assumptions like any other model which provided ground for criticism. The assumptions of the Capital Assets Pricing Model (CAPM) are Investors hold expanded portfolios, Single period operation horizon, Investors can borrow and lend at the risk-free rate of return, perfect capital market (Tony Head, 2008).These assumptions are the weakness of this model. The Capital Assets Pricing Model (CAPM) consists of science and art (Adeyemi, 2006). The science is decision making relates to the construction of market portfolio. But the art relates to representative thoughts that are significant at the margin of these decisions.

The Capital Assets Pricing Model is tested in many countries by different writers to find out the return of the stock. In 1974 Lau & quay applied the Capital Assets Pricing Model (CAPM) on Tokyo stock market and decided that the Model is applicable to the Tokyo stock market and gives the correct results; the investors in stock market were rewarded for bearing systematic risk. The study covered the period of 5 years (Oct 1964-Sep 1969) with sample size of 100 companies. Bjorn and Hordahl, (1998) in their paper examine the relation between expected return and time varying risk on the Swedish stock market covers 14 years period (1977-1990) with the sample size of 80 firms. Results of the Capital Assets Pricing Model (CAPM) were also compared with the results of traditional (GARCH) model. They determined that their results are very different from international proof of the Capital Assets Pricing Model (CAPM) where the traditional the Capital Assets Pricing Model (CAPM) very often is rejected in favors of asset pricing models that reply on more general measures of risk.

One of the first empirical studies that found helpful suggestion for Capital Assets Pricing Model (CAPM) is that of Black, Jensen and Scholes [1972]. Using monthly return data and portfolios rather than individual stocks, Black, Jensen and Scholes whether the cross-section of expected returns is linear in beta. By joining securities into portfolios one can spread away most of the firm-specific component of the returns, thereby attractive the accuracy of the beta estimates and the expected rate of return of the portfolio securities. This method moderates the statistical problems that arise from measurement errors in beta estimates. The authors found that the data are reliable with the calculations of the Capital Assets Pricing Model (CAPM) i.e. the relative between the average return and beta is very close to linear and that portfolios with high (low) betas have high (low) average returns.

The model was developed in the early 1960's by Sharpe [1964], Lintner [1965] and Mossin [1966]. In its simple form, the Capital Assets Pricing Model (CAPM) forecasts that the expected return on an asset above the risk-free rate is linearly associated to the non-diversifiable risk, which is measured by the asset's beta.

Fama and McBeth [1973] they examined whether there is a positive linear relation between average returns and beta. Moreover, the writers examined whether the squared value of beta and the uncertainty of asset returns can explain the outstanding difference in average returns across assets that are not explained by beta alone.

Fama and French [1992] In general the studies responding to the Fama and French test by and large take a closer look at the data used in the study. Kothari, Shaken and Sloan [1995] argue that Fama and French's [1992] findings depend basically on how the statistical findings are read. Despite the above criticisms, the general reaction to the Fama and French [1992] findings has been to focus on another Asset Pricing Models.

Jagannathan and Wang [1993] argue that this may not be necessary. As an alternative they show that the lack of observed support for the Capital Assets Pricing Model (CAPM) may be due to the wrongness of basic assumptions made to help the observed analysis. For example, most observed tests of the Capital Assets Pricing Model (CAPM) assume that the return on broad stock market indices is a good alternative for the return on the market portfolio of all assets in the economy. However, these types of market indexes do not detention all assets in the economy such as human capital.

Zhou (1993) rejected the mean-variance competence given the regularity statement. This paper further concluded that the competence of the two moments model cannot be rejected when using alternate distributions, thus the normal is the most efficient one of the used distribution. Christopher and William (1990) introduced ARCH effects in daily stock returns. The paper concluded that ARCH may be assumed as a sign of the daily time requirement in the rate of information arrival to the market for individual stocks. A liquidity based asset pricing model was introduced by (Bent and Jean, 2001). They developed a model which is driven by a trade demand for liquidity meaning that consumers do not hold any bonds or other assets that sell at a premium. The paper employed a standard activity model wherein part of the returns from investments of a firm cannot be pledged to outsiders, hence raising a demand for long term funding like liquidity.

Huang, (2000) covers period of 8 years (1986 to 1993) with sample size of 93 firms. It was applied on the two different sets a high risk and the other was low risk set. He found that the high risk sets are incompatible with the Capital Assets Pricing Model (CAPM) whereas data from the low-risk set is reliable with the Capital Assets Pricing Model (CAPM). He decided that the results of the Capital Assets Pricing Model (CAPM) are not actual the return calculated by the model does not understand the actual position and could not be relied upon. There are some results which maintenance the argument that the return was not just based on the single risk factor (Scheicher, 2000). The study of Scheicher, (2000) covers period of twenty three years on a sample of twelve companies with 276 observations. The result of the study documents that the result of the GARCH or other multi risk factor models simply out completes the Capital Assets Pricing Model (CAPM) results.

The research conducted by Gomez and Zapatero, (2003) covering 26 years' period (1973-1998) with sample size of 220 US securities from S&P 500 index. They use two risk factors one was standardized market systematic risk factor and other was active management risk. The interpretation of these results as evidence is in favors of the two Beta model. The same research applied on the UK stock market with sample of 64 securities gave the results in favors of this model because of the similarities in the market structure of UK and US.

Fraser and Hamelin, (2004) documented that in early researches the findings conclude that the results of the Capital Assets Pricing Model (CAPM) are accurate and correct but as the time pass the more accurate tools like APT outperforms the CAPM result. The study covers twenty two years period (1975 to 1996) and the sample size was 7 sectors. The research conducted on the London stock exchange and results of the Capital Assets Pricing Model (CAPM) were compared with the conditional GARCH model. The risk and return calculated by the GARCH model are correct that are negative in nature but when calculated through the Capital Assets Pricing Model (CAPM) the finding didn't match the actual situation which is correctly measured by the GARCH model. The same study conducted in the Australian stock market covering six years period (1988 to 1993) with sample size of 8 sectors, gave the same results.

They concluded that the results of GARCH model and Arbitrage Pricing Theory (APT) model are same but the findings of the CAPM are different, hence, decisions taken on the basis of the Capital Assets Pricing Model (CAPM) might be misleading (Greenwood and Fraser, 1997).

Johansson (2005) tested this model in Swedish Stock Market by introducing skewness and Kurtosis risk, significance a four moment the Capital Assets Pricing Model (CAPM). They found that the model improves when increasing the standard the Capital Assets Pricing Model (CAPM) with both skewness and kurtosis risk which bring statistically significant risk premiums. This result is reliable with results resolved by Kraus and Litzenberger (1976) as stated above. Both studies were carried out in two different markets but the results were similar. In other words, the model is applicable if skewness and kurtosis is also measured while calculating the return of any security. Javid and Eatzaz (2008) conducted a study to test the validity of the Capital Assets Pricing Model (CAPM) by using four moments CAPM in Karachi Stock Market. They covered the period of July 1993 to December 2004 with the sample size of 49 firms, which covered 90 percent to the total turnover of KSE in the year 2000. They found that the model with two moments is inadequate for Pakistani equity market. They further discussed that the asset returns in Pakistani equity market do not follow normality, indicating that investors are concerned about the higher moments of return distribution. Here again the study of Kraus and Litzenberger (1976) validated in case of KSE because results are consistent with their results.

Ansari, Naeem and Zubairi (2005) stated that, according to the Capital Assets Pricing Model (CAPM) the market risk behavior, since people are generally risk averse. The risk premium for the total of all risky assets must be helpful to induce people to hold the total amount of risky assets in a financial system. The market (according to CAPM theory) rewards only effective risk bearing. The risk premium on any individual security is not related to its own risk but to its contribution to the total risk of an efficiently diversified portfolio.

Grigoris and Stavros, (2006) on Greek stock market cover five years period (1998-2003) with sample size was 100 securities listed on Athens Stock Exchange. The main finding of this study does not support basic statement like high risk and high level of return. The finding from the Capital Assets Pricing Model provides better results for some years but overall it did not support the model.

Hui and Christopher, (2008) conducted a study cover eleven years (1996 to 2006) with sample size of 95 companies in United States and Japan recognized frame work, shows that the Capital Asset Pricing Model fails to explain the exact return when applied to Japan and US stock markets. It significantly gives negative return which occurs as a result of the instability. Instability does influence stock returns. However, the instability of the Japan and US stock prices forecasts the time series of stock returns and is priced in the cross-section of stock returns. The return calculated using the rates finally give return which do not show the correct results on a specific time period.

Canegrati (2008) studied the association between the sign of market returns and beta coefficients within six sectors of stocks listed on the Milan Stock Exchange. The suggestion showed that the intercept was equal to zero, secondary the Capital Assets Pricing Model (CAPM) which accepts that the only related variable in the regression is the additional return on the market portfolio. As an importance of this it was determined that betas totally capture the cross sectional difference of expected additional returns and can be seen as a measure of asset risk. Tests using a fifteen-year sample of monthly returns inspected the relation between the sign of market returns and beta coefficients and noticed being of an export positive and negative

Dash and Rao (2009) studied a sample of 50 stocks listed on the National Stock Exchange (NSE) belonging to eight most booming industries in the Indian economy. The purposes of the study were to associate and measure applicability of the Capital Assets Price Model (CAPM) and Arbitrage Pricing Model (APT) to Indian capital markets, and to find out how macroeconomic variables affect the returns of different securities. The results of the study

show that the Arbitrage Pricing Model (APT) does not have a significantly better descriptive power over the Capital Assets Pricing Model (CAPM) for Indian capital markets.

The Turkish cement industry started initial production in 1911 with 20 000 tpa capacity. In the 1950s, production achieved target until 370 000 tpa, but it did not meet domestic market demand until the 1970s. In fact the country's cement manufacturing capacity arising every year, has gained increasing values in the economic development of Turkey, as well as providing incredible employment in Turkey. Recently, cement sector in Turkey includes a total of 69 cement plants (48 integrated plants and 21 grinding-packing plants), employs 15 000 people and producing an annual turnover of US$4 billion. Bulent Kolanci, ABB (2013).

At this era, Turkey's cement industry has no in difficult situation in meeting local demand, and has become the biggest cement exporter in Europe as well as in Asia, with US$913 million or 14.4 million t exported. in 2011.

While producing cement in accordance with EU norms, Turkish cement producers undertaking huge energy costs, which can put it at a degrade level to the cement industries of some other countries.

It currenly have largest position to export more than 100 countries and, particuşarly after the crisis of 2008, continues to seek new markets such as the West African States. Within the next 10 years, expected export volumes are suppose to reach about 20 million t. Bulent Kolanci, ABB (2013).

This pre-analysis has been wide range of energy challenge suffering Turkey and provides critiques and suggestions for further policy development. Turkey would be considered the rapidly medium to long-term growth in energy demand among the IEA countries. It has a cosmopolitan youth and utilization of energy is still comparatively low. Hence, ensure to supply sufficient energy to a growing economy has been the government's main energy policy

concern. Not only producing energy has been their main propaganda but open incorporated energy policy has also been their concern over the past few years. International Energy Agency (2009).

Huge asset investment in energy infrastructure, particularly in electricity and gas, are necessary to avoid bottlenecks in supply and to sustain fast economic growth. To make attraction concerning the investment, the country necessary to continue reforming its energy growth. Reformation in power sector use to be reliable, but in the natural gas sector reform has been under-estimated and require to be accelerated.

Improving energy potency is crucial for responding to Turkey's energy policy challenges, and respectable potential remains in all sectors. in an exceedingly country wherever non-public cars are chop-chop turning in to additional common and wherever important new construction is expected, transport and buildings advantage explicit long attention from the choice manufacturers. Energy-related co2 emissions have over doubled since 1990 and are possible to still increase chop-chop over the medium and long run, in parallel with energy demand. The IEA urges Turkey to accentuate efforts to any develop its approach regarding its post-2012 regime to combat temperature change, and to contemplate setting a quantitative overall target for limiting emissions. International Energy Agency (2009).

As the sector expands, policy manufacturers within the country are operating toward the complementary goals of accelerating the energy production – and security – within the country, whereas at the same time mitigating the potential impacts of temperature change. Faced with this challenge of providing additional energy that's not solely reasonable and reliable, however clean moreover, the country is gazing ways that to any have interaction the non-public sector in meeting this challenge. In doing thus, the country is additionally deepening its cooperation with international establishments like the world Bank group.

Rapid economic process, manufacture, and steady increase in Turkey over the last decade are currently combining to apace remodel the country's energy sector. though this last decade of development has helped to extend electricity generation within the country by eightieth, as well as a rise of ninetieth in renewable energy generation, a median annual increase in demand of near seven-member since 1990 has meant that additional efforts to confirm the provision of unpolluted and reliable electricity still be necessary. World bank (2013).

In operating to deal with this case, the govt. of Turkey is functioning to realize the complementary goals of up energy security, increasing energy potency, and additional developing renewable resources. As a part of this effort, officers in Turkey have enforced a series of measures designed to spur investment and innovation within the energy sector - as well as an in progress easement program that has all over electricity subsidies, improved the regulative setting, and paved the method for the privatization of state-owned electricity distribution and generation assets. World bank (2013).

Fundamental to those efforts has been an accrued role for personal firms wanting to speculate within the energy sector. In recent years, energy firms - with support from banks and investors - have invested with billions of greenbacks in technologies, projects, and programs capable of accelerating energy generation and decreasing energy intensity within the country. World Bank (2013).

As an extra commitment to increasing the participation of the personal sector within the sphere of energy in Turkey, the country is functioning with variety of international partners - as well as IFC, the International Finance Corporation - to beat a number of the business risks and regulative uncertainty that ar related this transition in Turkey. World bank (2013).

As a part of this cooperation, IFC is supporting those personal sector investments in power generation, wherever solely thirty seventh of the generation capability is in

camera owned . throughout the last 5 years, if cconsiderably accrued its finance of renewable energy comes, and has invested with $2.3 billion in five comes within the power generation sector. Through its investments within the power sector, UN agency has reachedseven.9 million customers.

IFC has conjointly invested with regarding $700 million in seventeen energy potency comes, of that over 0.5 was channeled through business banks for on-lending to energy potency comes, as well as Is Bank, TSKB, Akbank, and Sekerbank. World Bank (2013).

These investments, which include the liquidity and biggest syndication IFC has ever become - $700 million in EnerjiSa for the progress of one natural-gas fired thermal power plant and 10 hydropower plants - are already started to have an impact. Since the establishment of this mutual cooperation, power generation in the country has risen by 3,000 megawatts and 7.9 million energy consumers surrounding the country are being facilitated with improved service. World Bank (2013).

Beyond just power production, however, this agreement is also exposing measures that can help rising energy efficiency within country and decrease the climate impacts of the energy sector as a compliment. Made Investments in companies such as Enerjisa and AkEnerji are emphasizing on renewable resources such as hydropower, while mutual projects such as the TSKB Sustainable project work to develop the global environment through eliminated emissions of greenhouse gases and other conventional pollutants. World Bank (2013).

This dual of the sudden challenge of energy security with the enduring challenges of climate deregulate mitigation the multi-pronged approach policy makers in Turkey are considering to improve the energy situation in the country as a full. By comparing its deregulation and privatization struggle with mutual investments with the IFC, officials are able to decrease and spur investment by the private companies. By emphasizing these investments on initiatives that one two one expose energy production and mitigate the effect of climate change, these

companies are taking into considering mutual investment today and future. Hence doing all of these things, Turkey as a country is basically transforming its power sector and working to provide suitable, reliable, and affordable. World Bank (2013).

Methodology:

CAPM:

We are applying the model of CAPM (Capital Asset Pricing Model). Its links together the no diversifiable risk and return of all sectors. First it describes the Beta (β) coefficient and which measures the non-diversifiable risk. The second section describes the equation of the model.

BETA (β) Coefficient:

It describes the non-diversifiable risk. It's the index of the degree of movement of an asset's return in response to change the market return. Asset historical returns are used in finding the asset beta coefficient. The market return is the return on the market portfolio of all traded securities.

Data Description:

This study is conducted to investigate the Capital Assets Pricing Model (CAPM) in Turkey based on the sources of information from ISTANBUL STOCK EXCHANGE emphasizing only on the Cement sector and Power generation & distribution sector. The data range is from 1st January 2012 to 31st December 2013.

Purpose of Study:

This study aims at testing the applicability of the model to describe risk-return relationship in the Cement sector and in the sector of Power generation and Distribution in Turkey.

Second purpose is to compare both of sectors and done the regression analysis on both the sectors and then compare which sector is more attractive than other.

Sample Size:

In the Cement Sector the total 50 companies listed and unlisted in Istanbul Stock Exchange but we get data only 10 companies and in the Power Generation and Distribution the total 40 companies listed in Istanbul Stock Exchange but we get data only 10 companies.

Equation:

$$CAPM = R_f + \beta(R_m - R_f)$$

$CAPM$ = Capital Assets Pricing Model

R_f = Risk free rate of return which is approx 10%

β = *Coefficients* Beta (Index of the non-diversifiable risk)

R_m = Return on the market portfolio of Asset which is 13.5%

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CEMENT SECTOR

Companies:

The Istanbul Stock Exchange listed and unlisted companies are 50 but only 10 furtune companies' data use in this research.

TABLE: 01

COMPANY NAME	CODE
(1) AS Cement Industry	AACL
(2) Bastas Cement Industry	ACPL
(3) Bursa cement Industry	BWCL

(4) Lafarge Eregli Cement Industry	CHCC
(5) Denizli Cement Industry	DGKC
(6) Goltas Goller Bolgesi Cement Industry	DBYC
(7) Konya Cement Industry	DNCC
(8) Nuh Cement Industry	DCL
(9) Askale Cement Industry	FCCL
(10) Akcansa Cement Industry	FCL

TABLE: 02

COMPANY NAME	*Coefficients*	*t Stat*	*P-value*
(1) AS Cement Industry	0.001513935	0.116879503	0.907003626
(2) Bastas Cement Industry	-0.000387374	-0.07400943	0.941032901
(3) Bursa cement Industry	-0.002196973	-0.15947353	0.873450559
(4) Lafarge Eregli Cement Industry	-0.007044133	-0.728320385	0.466770436
(5) Denizli Cement Industry	-0.004331571	-0.647846178	0.517385418
(6) Goltas Goller Bolgesi Cement Industry	0.041326743	2.040298113	0.041877856
(7) Konya Cement Industry	0.017620207	0.377516303	0.706086531
(8) Nuh Cement Industry	-0.012269944	-0.757532042	0.449092363
(9) Askale Cement Industry	-0.005336831	-0.706475707	0.480225425
(10) Akcansa Cement Industry	-0.003909368	-0.243781277	0.807516216

In Cement Sector listed and unlisted companies are approximately 50 but only 10 companies' data use in this research.

Table # 02 Conclusion:

The Confidence Level and Bench Mark Rate is 5% (0.05), which means results are Significant. Above the rate 5% (0.05) shows results In-significant, so mention data shows results above the rate except one company, the overall results are In-significant.

AS Cement Industry *Coefficients* Beta *(β)* (0.001513935), t *Stat* (0.116879503) and *P-value* (0.907003626) it is In-significant.

Bastas Cement Industry *Coefficients* Beta *(β)* (-0.000387374), t *Stat (*-0.07400943) and *P-value* (0.941032901) it is In-significant.

Bursa cement Industry *Coefficients* Beta *(β)* (-0.002196973), t *Stat* (-0.15947353), and *P-value* (0.873450559) it is In-significant.

Lafarge Eregli Cement Industry *Coefficients* Beta *(β)* (-0.007044133), t *Stat* (-0.728320385), and *P-value* (0.466770436) it is In-significant.

Denizli Cement Industry *Coefficients* Beta *(β)* (-0.004331571), t *Stat* (-0.647846178), and *P-value* (0.517385418) it is In-significant.

Goltas Goller Bolgesi Cement Industry *Coefficients* Beta *(β)* (0.041326743), t *Stat* (2.040298113), and *P-value* (0.041877856) it is Significant.

Konya Cement Industry *Coefficients* Beta *(β)* (0.017620207), t *Stat* (0.377516303), and *P-value* (0.706086531) it is In-significant.

Nuh Cement Industry *Coefficients* Beta *(β)* (-0.012269944), t *Stat* (-0.757532042), and *P-value* (0.449092363) it is In-significant.

Askale Cement Industry *Coefficients* Beta *(β)* (-0.005336831), t *Stat* (-0.706475707), and *P-value* (0.480225425) it is In-significant.

Akcansa Cement Industry *Coefficients* Beta *(β)* (-0.003909368), t *Stat* (-0.243781277), and *P-value* (0.807516216) it is In-significant.

POWER GENERATION AND DISTRIBUTION SECTOR

Companies:

The ISTANBUL STOCK EXCHANGE listed and unlisted companies are 40 but only 10 companies' data use in our research.

TABLE: 03

COMPANY NAME	CODE
(1) Istanbul Anadolu Yakasi Electricity Distribution Company	ALTN
(2) Aydem Electricity Distribution Company	GENP
(3) Enerjisa Baskent Electricity Distribution Company	HUBC
(4) Akedas Electricity Distribution Company	IDEN
(5) Calik Yesilimak Electricity Distribution Company	JPGL
(6) Coruh Electricity Distribution Company	KAPCO
(7) Bogazici Electricity Distribution Company	KESC
(8) Trakaya Electricity Distribution Company	KOHE
(9) Akdeniz Electricity Distribution Company	KOHP
(10) Aras Electricity Distribution Company	SEL

TABLE: 04

COMPANY NAME	*Coefficients*	*t Stat*	*P-value*
(1) Istanbul Anadolu Yakasi Electricity Distribution Company	-0.014760979	-0.795576301	0.427057994
(2) Aydem Electricity Distribution Company	-0.034941629	-0.985510782	0.324862598
(3) Enerjisa Baskent Electricity Distribution Company	-0.003186958	-0.792144787	0.428656478
(4) Akedas Electricity Distribution Company	-0.008159915	-0.351750478	0.726163181
(5) Calik Yesilimak Electricity Distribution Company	-0.006568306	-0.472881859	0.636506331
(6) Coruh Electricity Distribution Company	-0.008317724	-2.197154816	0.028472986
(7) Bogazici Electricity Distribution Company	0.011450272	1.082801399	0.279424819
(8) Trakaya Electricity Distribution Company	-0.000829192	-0.116994687	0.906916577
(9) Akdeniz Electricity Distribution Company	-0.003482588	-0.200514262	0.841175003
(10) Aras Electricity Distribution Company	-0.003955093	-0.540347584	0.589235807

In Turkey Power Generation and Distribution Sector listed and unlisted companies are approximately 40 but only 10 companies' data use in this research.

Table # 04 Conclusions:

The Confidence Level and Bench Mark Rate is 5% (0.05), which means results are significant. Above the rate 5% (0.05) shows results insignificant, so mention data shows results above the rate except one company, the overall results are In-significant.

Istanbul Anadolu Yakasi Electricity Distribution Company *Coefficients* Beta *(β)* (-0.014760979), t *Stat* (-0.795576301), and P-*value* (0.427057994) it is In-significant.

Aydem Electricity Distribution Company *Coefficients* Beta *(β)* (-0.034941629), t *Stat* (-0.985510782), and *P-value* (0.324862598) it is In-significant.

Enerjisa Baskent Electricity Distribution Company *Coefficients* Beta *(β)* (-0.003186958), t *Stat* (-0.792144787), and *P- value* (0.428656478) it is In-significant.

Akedas Electricity Distribution Company *Coefficients* Beta *(β)* (-0.008159915), t *Stat* (-0.351750478), and *P-value* (0.726163181) it is In-significant.

Calik Yesilimak Electricity Distribution Company *Coefficients* Beta *(β)* (-0.006568306), t *Stat* (-0.472881859), and P-*value* (0.636506331) it is In-significant.

Coruh Electricity Distribution Company *Coefficients* Beta *(β)* (-0.008317724), t *Stat* (-2.197154816), and P-*value* (0.028472986) it is Significant.

Bogazici Electricity Distribution Company *Coefficients* Beta *(β)* (0.011450272), t *Stat* (1.082801399), and *P-value* (0.279424819) it is In-significant.

Trakaya Electricity Distribution Company *Coefficients* Beta *(β)* (-0.000829192), t *Stat* (-0.116994687), and *P-value* (0.906916577) it is In-significant.

Akdeniz Electricity Distribution Company *Coefficients* Beta *(β)* (-0.003482588), t *Stat* (0.200514262), and P-*value* (0.841175003) it is In-significant.

Aras Electricity Distribution Company *Coefficients* Beta *(β)* (-0.003955093), t *Stat* (-0.540347584), and P-*value* (0.589235807) it is In-significant

Conclusions & Recommendations:

This study is showed to examine the CAPM (Capital Asset Pricing Model) in Turkey based on the sources of information from Istanbul Stock Exchange highlighting only on the Cement Sector and Power Generation & Distribution Sector. The data range is from 1st January 2012 to 31st December 2013. In the Cement Sector the total 50 companies listed and unlisted in Istanbul Stock Exchange but we get data only 10 companies and in the Power Generation and Distribution the total 40 companies listed and unlisted in Istanbul Stock Exchange but we get data only 10 companies. In Cement Sectors 9 companies results are In-significant and 1 company result is a significant show which means that Capital Assets Pricing Model (CAPM) is not applicable in Turkey Cements Sector. In Power Generation and Distribution Sector 9 companies results are In-significant and 1 company result is significant shows which means that the Capital Assets Pricing Model (CAPM) is not applicable in Power Generation and Distribution Sector in Turkey. The significances are only important for only mention stocks and only for few years. The preparation is to estimate a stock's market beta and combine it with the risk free interest rate and the average market risk premium to produce an estimate.

According to conclusions, the Capital Assets Pricing Model (CAPM) is not the correct model to measure the risk and therefore required return; so investors cannot trust on this model for pricing of basic securities in Turkey recognized structure work. The future area of research includes the Capital Assets Pricing Model (CAPM) testing with the Cement Sector and Power Generation and Distribution Sector in Turkey. Future study can also be showed with more educated tools like Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model or Arbitrage Pricing Theory (APT) which is known as multifactor model to understand the Istanbul stock exchange pricing phenomenon.

Assumptions of CAPM:

- All investors can borrow or lend an unlimited amount at a given risk-free rate of interest and there are no restrictions on short sales of any assets.

- All investors have identical estimated of the expected returns, variances, and covariance's among all assets (that is, investors have homogeneous expectations).
- All assets are perfectly divisible and perfectly liquid.
- There are no transaction costs.
- There are no taxes.
- All investors are price takers (that is, all investors assume that their own buying and selling activity will not affect stock prices).

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