Stock Price Reaction to Dividends Declaration in Emerging Stock Markets: Application on the Egyptian Stock Market

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UBSTRACT

This study examines the common stock price behavior on ex-dividend day in Egyptian stock Market, and whether there is a significant statistical relationship between cash dividend as independent variable and stock price as dependent variable. The researchers executed the examination on the raw stocks' prices during the period from 2006 till 2010. It is noticeable that the Egyptian stocks market has special features where there are neither taxes on capital gains nor on cash dividends, and cash dividends in almost cases are distributed annually. The study is conducted on each year separately then on the accumulated data of all years to give diversity in results. A significant statistical relationship between cash dividend and price drop on ex-dividend day is found.

The research found that the stock raw price drops on ex-dividend day by less than the amount of cash dividend and the average ratio of change in price to cash dividend during the whole period from 2006 till 2010 is 0.534. Which means that there is a market abnormal return that can lead to an arbitrage opportunity for investors.

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1. Introduction

The effect of cash dividend on the change of stock price on ex-dividend day is one of the important topics researchers gave a lot of attention. Many researches questioned the existence of a significant statistical relationship between cash dividend and change in stock price on ex-dividend day and the type of this relationship. Most of previous theories focused on the tax effect on capital gains versus tax effect on dividend income based on the investor behavior, and most of them suggested that the stock price drop is less than cash dividend due to the differentiation of taxes imposed on capital gains and taxes imposed on cash dividend. This research is concerned with the effect of cash dividend on stocks price in Egyptian stocks market, where there is no tax imposed neither on capital gains nor on cash dividend.

2. Research Importance

Egyptian Stock Exchange is one of the most important Arab and African stock exchanges and also in the Middle East, and since no many researches where conducted on emerging markets, so this research contributes in filling the research gap related to the research problem. Moreover it provides important information to investors in Egyptian stocks market and also for managers of listed firms with respect to cash dividend decisions and its impact on the enterprise value and owners' wealth.

3. Research Problem

This research tries to answer the following questions:

- Is there significant statistical relationship between change in stock price on ex-dividend day and cash dividend?
- What is the average ratio of stock price drop to cash dividend? Research Importance

4. Literature Review

Many studies investigated the markets' reaction toward cash dividend in ex-dividend day regarding stock price. Campbell and Beranek (1955) found that the average ex-dividend day stock price drop is slightly less than the cash dividend, and Boyd and Jagannathan, (1994) found price drop is not significantly different from dividend amount. Eades (1984), Kato and Loewenstein (1995) found that the factors of level of dividend yield in addition to the difference between tax rates on dividend and capital gain would lead to ex-dividend day abnormal return. It could be concluded from the literature that stock price reaction to cash dividend can be justified by mainly three theories: "tax preference" ; signaling theory and indifferent ..

- **Taxes Preference**

The most famous study to interpret the difference between price drop and cash dividend due to differentiation between tax rates on cash dividend and capital gains, known as "tax explanation", is that of Elton and Gruber (1970). Their hypothesis assumed that the ex-dividend behavior of common stocks should be related to marginal tax rate of stockholders. Thus, the expected price drop to dividend ratio (PDDR) depend on the rate of tax on dividend and the rate of tax on capital gains. Many studies supported the Elton and Gruber (1970) tax hypothesis (Barclay, 1987; Graham, et.al, 2003; and Whitworth and Rao, 2010; Chen, et.al, 2013).

Around the world, a lot of studies proved that stock price drop on ex-dividend day is less than cash dividend supposing investors prefer capital gains more than cash dividend like Blandon and Blasco (2012) which investigated stocks return around ex-dividend in Spanish stock market, and Brown and Walter (1986) investigated the ex-dividend day behavior of Australian share price to find out that the drop of ratio on ex-dividend day is less than one and the price drop on ex-dividend day is between .75 and .80 of the dividend. Amadi (2005) explained the relationship between price drop on ex-dividend day and cash dividend because of the relation between supply and demand in each of cum-day and ex-day to explain that stocks price depends on expected and past dividend and lack of accrual pricing of dividends into the stock price which creates an abnormal return that result in an increase in demand of stock on cum-dividend day and increase in supply of stock on ex-dividend day. Due to the increase of demand in cum-day and the increase in supply in ex-day the stock price on the ex-dividend day has declined.

- **Dividend Irrelevance Theory**

Few studies investigated the reaction of market toward cash dividend regarding stock price where there is no taxes on cash dividend nor on capital gains such as Al-Yahyaee (2013), the study documented a negative relationship between ex-day premiums and dividend yields, a finding that is inconsistent with the dividend clientele hypothesis by Elton and Gruber (1970), and Frank and Jagannathan (1998) in Hong Kong stock market for the period from 1980 till 1993 found that the average of price drop is half of the average of dividends. Most popular study in the area of the irrelevancy of dividend policy is the study of (Miller and Modigliani, 1961), this study suggests that shareholder wealth is not affected by dividend policy without taking tax into consideration. This implies that stock prices should fall by the exact amount of cash dividend on the ex-dividend day.

- **signaling theory**

  Other researches considered the signaling theory as a good base to explain the stock price reaction to dividends declaration. Of these studies that of Ross (1977); Michaely, et.al (1995); Liljeblom, et.al, (2013); and Louis, et.al, (2006).

  While Miller and Rock (1985); Aharony and Swary (1980); Kalay and Loewenstein (1986); and Eades, et.al (1985) suggested that cash dividend increase has a positive effect on share's price where cash dividends decrease has a negative effect on share's price.

➢ Overnight Arbitrage and transaction cost

Rantapuska (2008) examines the ex-dividend day trading behavior in the Finnish stock market to find that there are investors with a preference for dividend income buy shares in cum-dividend day and sell on ex-dividend day, investors with no preference for dividend income sell shares in cum-dividend day and come back to buy on ex-dividend day and investors engage in overnight arbitrage to earn on average a 2% return on their invested capital. Blau, et. al (2011) examine short selling around dividend announcement and ex-dividend dates to find no abnormal high short selling prior the announcement of dividend decreases. Around ex-dividend dates they found abnormal short selling, they try to explain this result through return pattern around ex- dividend days to find that there is an increase in the level of short selling on and after the ex-dividend day. Lasfer (2008) hold a comparison between the ex-dividend day return in U.K. and Germany to find that despite of the similarity between tax regulation regarding the high differential between dividends tax and capital gains tax, the short-term trading impact mitigated the effect of tax differentiation in Germany to find low return whereas in U.K. short-term trading is regular to find high return. Heath and Jarry (1988) investigated the relationship between stock price behavior on ex-dividend day and the opportunity of arbitrage to find that although price drop can differ from cash dividend, there was no opportunity for arbitrage profit because of transaction cost. It is logically that significant transaction costs raise the degree of difficulty of arbitrage and in this case the price drop ratio will be reflection of tax rate (Elton, et.al, 1984; Karpoff and Walkling, 1990)

- **Discreteness in prices Hypothesis**

Bali and Hite (1998) explains why the ratio of change in price to dividend is less than one for both taxable cash dividends and nontaxable cash dividends to find that the reason is due to discreteness in prices rather than differential tax rates and that the investors will not pay more than the dividend amount for the dividend received so the price will decline to the nearest tick to the dividend.

- **Exciting Result**

Adapakkam and Martinez (2008) Studied the ex-dividend returns in Mexico to give an exciting result because they found that ex-dividend day price change is positive. They did not find any explanation for this result

- **Dividend Clientele Hypothesis**

Bauer, et.al (2008) studied the share price behavior in Canadian market around ex-dividend day. They found that the average of ex-dividend price drop is less than the average of the amount of the dividend paid. The study did not find any support for tax interpretation and dividend clienteles. In the same vein, Bali (2003) study did not support the tax-based dividend clientele hypothesis after analysis of ex-day price behavior around the elimination of fixed commissions and the tax reform acts through including all NYSE listed stocks covered by the Chicago University Center for Research in Security Prices (CRSP); they documented conditions against tax clientele.

On the other hand, Armstrong and Hoffmeister (2012) and Jakob and Ma (2007) examined the effect of changes in U.S. dividend taxation and the results confirm the existence of tax-induced dividend clienteles.

- **Bird in the hand theory**

Connelly, et.al (2008) investigated stock price changes on the ex-dividend day in 37 countries to analyze the factors affecting ex-dividend day stock prices in global capital markets and found that in addition to the importance of differential taxation of dividends and capital gains there are other factors affecting ex-dividend day stock prices. These factors are the variation in agency conflict and information asymmetry to find that in the countries with higher levels of agency conflicts and information asymmetry; investors have higher preferences to collect dividends so the ex- dividend day price drop was smaller than dividend.

This result is consistent with the result of this study regarding the relationship between stock price drop and dividends specially that the Egyptian stock market is not a perfect market regarding information symmetry.

5. Egyptian Stocks Exchange Market Background

- EGX 30 the index reflects active trading companies and the index is a good and reliable measure of the Egyptian market so the researcher choose the companies of EGX 30 to be the sample of the research. (www.egx.com.eg/english/OverviewEGX30.aspx [Accessed 2 July 2014])
- Egyptian Taxation and dividends: According to Egyptian Income Tax Law no. 91 for the year 2005: Dividends are exempted from income tax, and dividends distributed by an Egyptian company are not subject to withholding tax because they are paid out of corporate profits that are taxed under the normal rules. Dividends received by residents from foreign sources are not taxed in Egypt. Capital gains of shares are not subject to tax.

6. Hypotheses Development

- The population in this research is all firms listed in Egyptian stocks market.
- The sample contained all the combination of shares belongs to EGX30 index during the period from 2003 till 2010 (83 companies).
- The importance of the period of the study: Choosing the dividends during the period of 2006 till 2010 is to give wide space of time to the analysis. The end of the period of sample is

the year of 2010 is to eliminate the effect of political events due to Egyptian revolution in 2011.

Research Hypotheses

- **Hypothesis 1:**

There is a significant statistical relationship between cash dividend per share and drop of share price on ex-dividend day.

- **Hypothesis 2**

Share's prices fall in the ex-dividend day by the exact amount of the cash dividend per share.

- In the light of Miller and Modigliani (1961) who mention that shareholder wealth will remain unaffected by dividend policy in that without tax as a consideration.

Investor in cum-dividend day (the previous day before having the right of dividend) has two choices:

<u>**First choice:**</u> the investor sells his share then his wealth from this transaction will equal share's price in cum dividend day (Pcum), the investor will pay tax on his capital gain (Pcum – Po) where Po is the original purchase price of share, so his pure gain will equal (1-Tcg) * (Pcum – Po) and his wealth after this transaction will be equal Pcum – (Tcg(Pcum – Po)) where Tcg is the tax rate of capital gain.

Second choice: the investor will keep the share on his hand to have the right of receiving the dividend and then sell his share on ex-dividend day, and then his wealth will be equal share's price on ex-dividend day (Pex) plus dividend (D). the investor will pay tax on his capital gain (Pex – Po) and pay tax on dividend, so his pure gain will equal (1-Tcg) * (Pex – Po) + (1-Td) * D where Pex is share's price on ex-dividend day and Td is the tax rate on dividend and D is the cash dividend per share, and his wealth after these transactions will equal Pex – (Tcg (Pex - Po)) + (D (1-Td))

- Elton and Gruber (1970) mentioned the same information which is that the investor wealth will be indifferent if he sells his share in cum day or sell his share in ex-day so the equation will be:

$$\text{Pcum} - (\text{Tcg}(\text{Pcum} - \text{Po})) = (\text{Pex} - \text{Tcg}\,(\text{Pex} - \text{Po})) + \text{D}\,(1\text{-Td})$$

After rearranging the previous equation they reach to the following equation:(2)

$$\frac{\text{Pcum} - \text{Pex}}{\text{D}} = \frac{1 - \text{Td}}{1 - \text{Tcg}}$$

We refer to the left side of equation as "price drop to dividend ratio" (PDDR). The right side of the equation is called ex-day tax preference ratio

(2) Pcum – (Tcg (Pcum – Po)) = (Pex – Tcg (Pex - Po)) + D (1-Td)
Pcum – (Tcg * Pcum) + (Tcg * Po) = Pex – (Tcg * Pex) + (Tcg * Po) + D (1-Td)
Pcum – Pex = (Tcg * Pcum) – (Tcg * Pex) + (Tcg * Po) - (Tcg * Po) + D (1-Td)
Pcum – Pex = (Tcg * Pcum) – (Tcg * Pex) + D (1-Td)
Pcum – Pex = Tcg (Pcum Pex) + D (1-Td)
(Pcum – Pex) - Tcg (Pcum – Pex) = D (1-Td)
(1-Tcg) (Pcum – Pex) = D (1 – Td)
(Pcum – Pex) / D = (1-Tcg) / (1 – Td)

(Chetty et al. 2005) because it reflects the differentiation between ordinary taxes on the dividend versus capital tax on capital gain.

According to Elton and Gruber model there are three cases:

- First case: if Tcg < Td then (Pcum – Pex) / D < 1 then (Pcum – Pex) < D
- Second Case: if Tcg > Td then (Pcum – Pex) / D > 1 then (Pcum – Pex) > D
- Third Case: if Tcg = Td then (Pcum – Pex) = D

- In Egyptian case during the period of investigation, there is no tax on dividends and there is no tax on capital gains, so Td is zero and Tcg is zero.

  Hence price drop to dividend ratio (PDDR) = $\frac{\text{Pcum}-\text{Pex}}{\text{D}} = 1$ in the absence of effect of risk and speculation.

- The proposed model for this research to test hypothesis 3 is the model extracted from Elton and Gruber (1970) which is: $\frac{\text{Pcum}-\text{Pex}}{\text{D}} = 1$

  The left side of the relationship is ex-dividend day price drop to dividend ratio (PDDR) and according to hypothesis 3 it should be equal to one because the drop in price on ex-dividend day should be exactly equal to cash dividend per share.

➢ Research Variables

- To test the hypotheses we need to know the following variables for each stock in the population's sample:

- Stock's price in cum-dividend day "Pcum"
- Stock's price in ex-dividend day "Pex"
- The amount of cash dividend per share "D"

➢ **Statistical Analyses Methods**

EXCEL – Data Analysis is used as a statistical method to analysis and explanation of collected data, and the researchers used SPSS in analysis of one year data to ensure and match results. Simple linear regression and correlation coefficient are used to test hypothesis one; and statistical analysis are used to test hypothesis two.

7. Data Analysis and Results Discussion

The sample contains the stocks which added to EGX 30 through the period from 2003 till 2010 even if eliminated from the index, this sample give the opportunity to observe actively traded companies in Egyptian stocks market and have available and reliable prices. Not all companies did cash dividend during this period; For the 83 companies, found 35 cash dividend announcements during the year of 2006, 44 cash dividend announcements during the year of 2007, 46 cash dividend announcements during the year of 2008, 51 cash dividend announcements during the year of 2009, 49 cash dividend announcements during the year of 2010. This makes total observations of 225 and after elimination of outliers of each year and elimination of abnormal dividends; the total observations during the period from 2006 till 2010 are 212 observations. In some cases a firm has more than one announcement during the same year; in this case the study deal with each announcement separately. In some cases a firm divides one cash dividend into two distributions each one has different payment date but all cash dividend has one maturity date; in this case we combine the two distributions into a single observation. In some cases a firm dividend is in USD or equivalent whereas its price is in Egyptian pound; in these cases the researcher transfer the dividend amount into Egyptian pound according to announced exchange rates in the day mentioned in distribution announcement. The price which used in this research is close price. In some cases a firm dividend and price is in USD; in these cases we keep it in its currency without changing into Egyptian pound. We exclude any observation if the dividend is due to abnormal activities like capital earning distribution.

During the period from 2006 till 2010 each year has been examined separately then all the period has been examined together to give a variety of observations.

The source of cash dividend announcement is EGID "Egypt for Information Dissemination" which is the authorized company to publish the information about Egyptian stocks exchange market. This source of data is very important to ensure that the data is including all the announcement of dividend during this period. After the collection of data through secondary source the researcher reviewed those through the available data in the network of Misr Information Services & Trading (MIST) which is an Egyptian company founded in the year 1989 with a vision of creating an informed online financial society. The researchers obtained daily stocks prices from the data base of MetaStocks which is one of popular used sources for providing, charting and technical analysis of stocks prices.

- Hypotheses one Testing and Results Discussion

Hypothesis 1: There is a significant statistical relationship between cash dividend per share and drop of share price on ex-dividend day.

This hypothesis was tested through the correlation test between "drop in share price on ex-dividend day" and "cash dividend per share" then applied simple linear regression analysis between "drop in share price on ex-dividend day" as dependent variable and "cash dividend per share" as independent variable, then Scatter Diagram is used to illustrate the relationship between dependent and independent variables. These tests are applied for each year for the period from 2006 till 2010 separately as illustrated in Appendix B then applied for the five years together as illustrated in the following:

Table 1: 2006 - 2010 Price Drop and cash dividend Correlation:

	Cash Dividend	Price Drop
Cash Dividend	1	
Price Drop	0.904462	1

- There is a positive and significant correlation equal to .90 between cash dividend and price drop on ex-dividend day.

Table 2: 2006 - 2010 Price Drop and cash dividend Regression Analysis:

Regression Statistics	
Multiple R	0.904462
R Square	0.818051
Adjusted R Square	0.817184

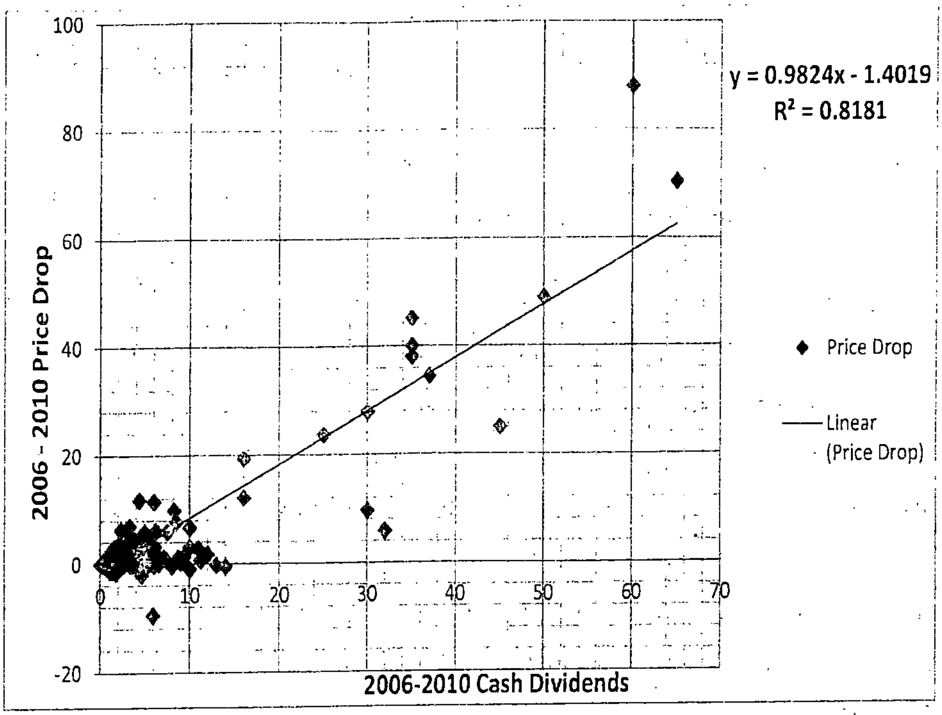
Standard Error	4.447253
Observations	212

- Cash dividend as independent variable interpret 82% of the share price drop on ex-dividend day as dependent variable "R Square equal to .82".

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	**-1.401914**	0.341441	-4.105878	0.000058	-2.075000	-0.728823
Dividend	**0.982444**	0.031973	30.727328	**1.20E-79**	0.919410	1.045473

- P-Value of each of intercept and dividend is less than 5% so the statistical relationships regarding them are reliable.

Chart 1: Regression Analyses between Cash Dividend and Price Drop for the period from 2006 till 2010



- The equation which interprets the relationship is: Price Drop = 0.9824 Cash Dividend - 1.4019

This hypothesis was tested to find that there is a positive correlation between cash dividend per share and price drop on ex-dividend day equal to 68%, 92%, 93%, 98%, 91% for the years of 2006, 2007, 2008, 2009, 2010 respectively as illustrated in Appendix B, and there is a positive correlation between cash dividend per share and price drop on ex-dividend day equal to 90% for the period from 2006 till 2010.

Through the value of "R Square" the Cash dividend per share as independent variable interprets 46%, 84%, 86%, 96%, 82.5% of the share price drop on ex-dividend day as dependent variable for the years of 2006, 2007, 2008, 2009, 2010 respectively as illustrated in Appendix B, and the Cash dividend per share as independent variable interprets 82% of the share price drop on ex-dividend day as dependent variable for the period from 2006 till 2010.

P-Value of dividend for each year and for total years is less than 5% so the statistical relationship regarding dividend is reliable.

The empirical findings of the year of 2006 shows that the cash dividend does not have a significant impact on the drop of share price and the statistical relationship between cash dividend per share as independent variable and drop in share price as dependent variable is not significant so the hypothesis one has been rejected here. Whereas the findings of the years of 2007, 2008, 2009, 2010 show that the cash dividend have a clear and significant impact on the drop of share price and there is a significantly statistical relationship between cash dividend per share as independent variable and drop in share price as dependent variable

The empirical findings for the total period from 2006 till 2010 show that the cash dividend has a clear and significant impact on the drop of share price and there is a significantly statistical relationship between cash dividend per share as independent variable and drop in share price as dependent variable so hypothesis one has been accepted here and this results is matched with Kanon, A. (2013), Blandon and Blasco (2012), Frank and Jagannathan (1998), Bauer, et.al (2008).

- **Hypothesis 2 Testing and Results Discussion**

Hypothesis 2: Share's prices fall in the ex-dividend day by the exact amount of the cash dividend per share.

$$\frac{\text{Pcum} - \text{Pex}}{\text{D}} = \frac{1 - \text{Td}}{1 - \text{Tcg}}$$

- According to Elton and Gruber (1970) model the expected price drop to dividend ratio (PDDR) depend on the rate of tax on dividend and the rate of tax on capital gains. For Egyptian case there is no tax on dividends and there is no tax on capital gains, so the Td is zero and Tcg is zero so the model in Egyptian case is: $\frac{\text{Pcum}-\text{Pex}}{\text{D}} = 1$

This is the model of this study to test hypothesis 2.

- In tables 1, 3, 5, 7 & 9 in Appendix A the price drop to dividend ratio $\frac{\text{Pcum}-\text{Pex}}{\text{D}}$ is calculated for the years of 2006, 2007, 2008, 2009 and 2010 respectively.

- Then calculated descriptive statistics for price drop to dividend ratios for each year of the period from 2006 till 2010 separately as; and then calculated descriptive statistics for price drop to dividend ratios for the five years from 2006 till 2010 together and compare the value of the mean to the default value mentioned in the hypothesis 2 which is illustrated in the following:

Table 3: Price Drop to Cash dividend for the total period:

Dividend	Value	Price Drop	Value	Price drop to dividend	Value
Mean	**4.77302098**	**Mean**	**3.287311321**	**Mean**	**0.534006467**
Standard Error	0.657657421	Standard Error	0.714360358	Standard Error	0.04378719
Median	1.5	Median	0.495	Median	0.4475
Standard Deviation	9.575636589	Standard Deviation	10.40124381	Standard Deviation	0.637551116
Sample Variance	91.69281608	Sample Variance	108.1858728	Sample Variance	0.406471425
Kurtosis	16.94150004	Kurtosis	32.02860749	Kurtosis	1.258712292
Skewness	3.919545406	Skewness	5.243743341	Skewness	0.35971358
Range	64.9875	Range	97.45	Range	4.350994842
Minimum	0.0125	Minimum	-9.51	Minimum	-1.611864407
Maximum	65	Maximum	87.94	Maximum	2.739130435
Sum	1011.880448	Sum	696.91	Sum	113.209371
Count	212	Count	212	Count	212

The mean of price drop to dividend is equal to .534 so the hypothesis 3 has been partially rejected for the total period from 2006 till 2010.

The following is a table for the collection of means for the period from 2006 till 2010 related to cash dividend per share, price drop, and price drop to dividend ratio:

Table 4: Means Summary for the period from 2006 till 2010 related to hypothesis 3:

Period	Cash Dividend	Price Drop	Price Drop to Dividend Mean
2006	5.535151515	0.995454545	0.011273646
2007	4.012797619	2.365238095	0.42263003
2008	7.275	6.748536585	0.743956001
2009	4.310797258	3.982040816	0.67325842
2010	3.216571958	1.976808511	0.672234486
2006 till 2010	4.77302098	3.287311321	0.534006467

Hypothesis 2 has been rejected for the years of 2006, and has been partially rejected for the years 2007, 2008, 2009, 2010 and for the total period from 2006 till 2010.

According to empirical results, the average of share price drop on ex-dividend day is less than the average of the amount of cash dividends for each year of the study and for total period of the study and the mean of price drop to dividend per share is .01, .42, .74, .67, .67, for the years of 2006, 2007, 2008, 2009, 2010 respectively as illustrated in Appendix B, so the empirical results for the year of 2006 refer to that the hypothesis three is completely rejected, and partially rejected for the years of 2007, 2008, 2009, 2010.

The mean of price drop to dividend per share is .53 for the total period from 2006 till 2010.

The results of the total period from 2006 till 2010 refer to that the hypothesis three has been partially rejected. This result is consistent with Bird in the hand theory, this theory refer to that the countries with higher levels of agency conflicts and information asymmetry; investors have higher preferences to collect dividends so the ex- dividend day price drop was smaller than dividend, The result of this study is consistent with Bird in the hand theory specially that the Egyptian stock market is not a perfect market regarding information symmetry. On another hand this result is matched with the idea of the possibility of overnight arbitrage.

Also this results is matched with Blandon and Blasco (2012) which investigated stocks return around ex-dividend in Spanish stock market to find that stock price drop on ex-dividend day is less than cash dividend, and matched with Bauer, et.al (2008) which studied the share price behavior in Canadian market around ex-dividend day and found that the average of ex-dividend price drop is less than the average of the amount of the dividend paid, and matched with Connelly, et.al (2008) which found that in the countries with higher levels of agency conflicts and information asymmetry; investors have higher preferences to collect dividends so the ex- dividend day price drop was smaller than dividend, and matched with Frank and Jagannathan (1998) which examined the relationship between price drop and cash dividend on ex-dividend day in Hong Kong stock market for the period from 1980 till 1993 where there is no tax on dividend and there is no tax on capital gain to find that the average of price drop is half of the average of dividends.

8. Conclusion and Recommendations

➢ Conclusion

The puzzle of cash dividend is a very important subject because of its effect on shares' prices, thus, its effect on the value of enterprises and investors' wealth. Many researches examine the effect of cash dividend on shares price on ex-dividend day in many stocks exchange markets around the world during different periods of time.

The main questions of this research are:

- **Is there a significant statistical relationship between cash dividend per share and drop in share price?**
- **What is the strength of the effect of cash dividend on the shares price on ex-dividend day in Egyptian stocks market during the period of the study from 2006 till 2010?**

Egyptian stock exchange market during the period of study from 2006 till 2010 give precious opportunity to examine the effect of cash dividend on shares price on ex-dividend day, because there is no taxes on cash dividend nor on capital gains, that means there is no existence for tax differentiation effect, which where the focal point in the most of previous researches around the world.

The study suggested that there is a strong statistical relationship between cash dividend and the change in shares' prices on ex-dividend day, and suggested that the drop in share price on ex-dividend day is equal to cash dividend in the case of Egypt.

The study tested hypothesis one through the correlation test between "drop in share price on ex-dividend day" and "cash dividend per share", then applied simple linear regression analysis between "drop in share's price on ex-dividend day" as dependent variable and "cash dividend per share" as independent variable, then Scatter Diagram is used to illustrate the relationship between dependent and independent variable. Correlation test and simple linear regression test are applied for each year for the period from 2006 till 2010 separately then for the five years together to find that for the year of 2006 the cash dividend does not have a significant impact on the drop of share price and the statistical relationship between "cash dividend per share" as independent variable and "drop in share price" as dependent variable is not significant, thus, the hypothesis one has been rejected here, and for the years of 2007, 2008, 2009, 2010 and for the total period from 2006 till 2010 there is a strongly statistical relationship between the drop in share price on ex-dividend day and the cash dividend per share, thus, the hypothesis one has been accepted here.

After examination of the second hypothesis of the research through statistical descriptive analysis to find the mean of the model of the research which derived from Elton and Gruber (1970) model, the study found that the drop in share price on ex-dividend day is less than the cash dividend per share and **the mean of the ratio of price drop to cash dividend during the whole period from 2006 till 2010 is 0.534**, and during each year separately are .011, .422, .744, .673, .672 for the years of 2006, 2007, 2008, 2009 and 2010 respectively. These mean that there is a significant statistical relationship between cash divided as independent variable and shares price drop on ex-dividend day as dependent variable, but the drop in raw price is not equal to cash dividend per share, and average drop in raw price is equal 53% of average cash dividend during the period from 2006 till 2010. These mean that there is a positive abnormal return on ex-dividend day which can lead to arbitrage opportunity around ex-dividend day.

- **Recommendations'**

  Results of this study give important recommendations for both investors and managers:

- For investors: because in most cases stock price falls by less than the value of cash dividend, thus the results of the study guide investors to retain the stocks until ex-dividend day.
- For managers: the results of study guide them to keep up giving cash dividend because it contributes to maximize the wealth of owners.

The study suggest for future researches to investigate the followings:

- The relationship between the positive abnormal returns on ex-dividend day and the cost of transaction to decide the feasibility of trading around ex-dividend day after the elimination of transaction cost.
- The effect of announcement of cash dividend on share price before ex-dividend day.

- To conduct the same study but on adjusted prices to the market not raw stock price.
- The effect of cash dividend per share on the drop of shares price in Egyptian stock market through the period from 2011 till 2014; and the proposed study results will provide a unique opportunity to compare its results with the results of this study to know the effect of Egyptian revolution on the findings of this study.
- The relationship between cash dividend and drop in stock price into different markets and making comparison between the studies' results.

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