

Factors Influencing IPOs Pricing and Performance in Saudi Arabia: A Halal and Haram Perspective

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Abstract

The objective of the study is to determine the factors affecting underpricing behaviour of IPOs in Saudi stock market. A special interest is to study the effect of Shariah (Note 1) compliance of Saudi investors on the extent IPO underpricing. The paper uses multiple regression analysis on the IPOs data for Saudi Stock market from 2004 to 2017 with a total of 105 observations.

The results show overwhelming evidence of underpricing of IPOs during the first day trading. The most important result of this piece of research is that investors positively respond to the IPOs with Shariah compliance and return is negatively affected by Shariah board (Note 2). The results also show that the abnormal returns are driven by the demand side factors like oversubscription. Other findings of the study show that premium to face value, type of audit firms and underwriters, and Saudi stock market index are significant determinants of the underpricing of IPOs.

The most important implication of this paper is that the existence of abnormal first day return in Saudi stock market shows the existence of market imperfections. By motivating the investors to invest in Shariah compliant IPOs, decreasing the element of uncertainty and ensuring information symmetry these abnormal returns can be normalized. The results show that Saudi society is partial towards Shariah compliant investment opportunities and the investors' desire to avoid investments involving Haram activities can be used to reduce market imperfections.

This paper identifies the important determinants of IPOs underpricing in Saudi stock market and sheds light on the effect of Shariah compliant firms on IPO underpricing.

Keywords: IPOs, underpricing, shariah compliance, auditor, stock market, Saudi Arabia

1. Introduction

Initial public offerings (IPOs) are the sale of the shares of a company going public for the first time. Underpricing occurs when the offer price of IPOs is below its market value, reflected in the price of the first day trading. Historically, IPOs have had very large initial first day gains compared to the rest of the market's performance and to the offering price. Generally, offer price is set by underwriters such that the average first-day return on IPO is positive.

There is great variation in the degree of underpricing ranging from 15 % to 500% depending upon the market conditions as well as the firm related factors. The behavior of IPOs underpricing is evident in the developed as well as in the developing stock markets. In the developed economies, a lot of studies have empirically concluded the existence of high levels of underpricing of IPOs. Among them are Allen and Faulhaber (1989), Chemmanur (1993), Ibbotson and Ritter (1995), Miller and Reilly (1987), and Ritter and Welch (2002). In emerging stock markets, number of studies have empirically demonstrated IPOs underpricing behavior (e.g. Abdul-Rahim and Yong, 2010; Soet and Ngugi, 2012; Chiraphadhanakul and Gunawardana, 2005; Bateni and Asghari, 2014; Alanazi and Al-Zoubi, 2015 and Mayes and Alqahtani, 2015). Loughran et al. (1994) study IPOs behavior in 25 countries and argue that IPO underpricing is higher in developing countries than in developed countries because markets in developed countries are more informationally efficient than markets in emerging countries.

Financial economists have tried to explain the behavior of IPOs underpricing. Some authors have found evidence in favor of the Signaling Hypothesis. According to this hypothesis, high quality firms underprice their IPOs so that their subsequent offerings perform well. Hence this underpricing is a signal of future reissues (Allen and Faulhaber, 1989; Welch, 1989; Grinblatt and Huang, 1989; Hamed and Lim, 1998 and Su and Fleisher, 1997). Some other studies have supported the Certification Hypothesis (Affleck-Graves et al., 1993; Chishty et al., 1996; Lin, 1996 and Hamao et al., 1998). According to the Certification Hypothesis, underwriters and auditors have a deeper understanding of the firm's intrinsic value and hence they set IPO price below fair price to account for adverse inside information.

Another important dimension is the Winner's Curse Hypothesis (Barry and Jennings, 1993; Aggarwal et al., 1993; Beatty and Ritter, 1986 and Rock, 1986). Under this hypothesis underpricing is a way to protect uninformed investors from bidding high prices and consequently falling into losses. Finally the Fad's Hypothesis assumes that IPOs are correctly priced, however, investors tend to overpay for them during their initial offerings (Aggarwal and Rivoli, 1990; Ritter, 1991 and Shiller, 1990).

Further investigation of underpricing behavior in emerging stock markets such as Saudi stock market is worthwhile since there are limited studies investigating pricing behavior in these types of stock markets. There is insufficient consideration of societal constituents of investment community on IPOs underpricing behavior and the governmental plans to improve their stock markets and to strengthen and accelerate IPOs process. This study aims to discover factors influencing the underpricing behavior of IPOs in Saudi stock market.

The study covers IPOs in Saudi stock market during the period from 2004 to 2017 where around 105 companies have initially offered public stocks. The data has been collected from Tadawul, Argaam and Gulfbase databases. Further detailed information has been collected from the prospectuses of the IPOs and their annual reports. A multiple regression method has been employed to examine the relation between the selected factors and the initial return of IPOs. The results show abnormally high underpricing of IPOs in Saudi stock market. It shows that the offering prices of new firms going public are regularly underpriced around 226.48 on average which is well above reported underpricing averages in many other markets. The average underpricing of 267% in Saudi Arabia reported by Mays and Alqahtani (2015) is comparatively higher because it covers the period between 2004-2010 during which the underpricing was higher. Other findings of the study show that reputed auditor has the highest impact on the Adj-Ret, followed by premium and over-subscription. Shariah board, stock variation and underwriter are the next most important determinant of the first day adjusted return.

According to the regression results, the coefficient of the variable, over-subscription is positive and statistically significant as hypothesized. It represents the demand side of investors. The presence of a Shariah board is a way to ensure that the company is not involved in any Haram transactions and it reduces the element of uncertainty. The study finds that existence of Shariah board negatively affects IPOs underpricing which is consistent with Mays and Alqahtani (2015).

1.1 The Study Context

Saudi stock market is an emerging stock market which has been growing substantially during the last 15 years in terms of regulations, size and IPOs activities. Currently, Saudi stock market is the largest in the Middle East (Forbes Middle East, 2018). The total market capitalization of the companies listed in Saudi stock market is 1,643,61 billion as on 2nd March 2017 (Tadawul, 2017). It is expected to grow substantially after listing some large national companies planned in the near future (Global Legal Insights, 2017).

Historically, stock exchange in Saudi Arabia goes back to the early seventies of the last century. Main regulations of Saudi stock market came after the establishment of the Capital Market Authority (CMA) as a governing body for Saudi Stock market under the Market Law in 2003 (Capital Market Law, 2003). According to this law, CMA is responsible for regulating and developing the capital market, over-seeing listing and issuance of securities, enhancing transparency and protecting investors from illegal practices (Capital Market Law, 2003). Since then, CMA has issued a number of regulations, rules and guidelines relating to listing securities, transparency and disclosure, governance, licensing and practicing, initial public offering etc.

Saudi stock market has been dominated by individual investors. Tadawul (2014) reports that individual investors and domestic institutions represent around 90% and 6%, respectively. Until 2015, foreign investors were not allowed to invest directly in Saudi securities but through Swap agreements with persons licensed by CMA. Simpson (2008) argues that because of issues relating to foreign investment openness, industry governance and transparency, Saudi stock market suffers from thin trading, lack of liquidity and lack of informational efficiency. Since 2015 CMA has launched Qualified Foreign investor (QFI) regime, where foreign investors can directly invest in Saudi stock market.

Global Legal Insights (2017) reports that the total ownership of foreign investors in Saudi stock market stood at 4.07% of total market capitalization. The results of this regime are still unobserved.

During the period from 2007 to 2016 the number of listed companies in Saudi stock market increased substantially by around 101% (Alarabiya, 2017), indicating that IPOs provide an important source of financing for Saudi corporations (Deutsche Bank, 2012). Currently, the number of listed companies in Saudi stock market is 177 representing different sectors such as energy, banks, insurance, transportation, retail, telecom, utilities etc. (Tadawul, 2017).

The key regulations relating to IPOs process are numerous. First, listing regulations in Saudi Arabia, allow only Saudi registered joint stock companies to seek listing in Saudi stock market. Further, issuers need to comply with the general provision of Capital Market Law relating to offering securities, prospectus requirements and relevant disclosure standards. IPO process goes through several stages containing numerous requirements.

At the first stage, an action plan and timetable for meeting all listing requirements has to be developed in order to assess the readiness for IPO. Then the issuer should appoint legal, financial advisers licensed by CMA and an underwriter authorized by CMA. Global Legal Insights (2017) reports that financial adviser usually acts as the lead manager, book-runner and underwriter. At the third stage, the issuer needs to take financial and legal due diligence and to comply with other requirements such as corporate governance regulations, prepare financial and capital models for valuation of the issuer and set a preliminary IPO price range. At the book-building and institutional offering stage, financial advisor runs book-building and IPO is only offered to institutional investors as bidders in the book building process. Also at this stage a price range is set by the issuer, the financial advisor and the underwriter. During the final stage shares are offered to the public which is followed by share allocation and listing of shares.

Gulf Cooperation Council (GCC) includes six Arabian Gulf countries and contains 7 regional stock markets. These markets showed high performance from 2003 to 2005 due to several reasons including soaring oil prices. However, there was correction in the stock markets leading to high losses to investors during 2005-2006. This trend was reinforced due to international financial crisis in 2008. Later the stock markets have not performed very impressively including 2011 crash. Drop in oil prices starting from 2014 has not helped the stock markets much.

The rest of the paper is organized as follows: A comprehensive review of literature is presented in section 2, while section 3 describes the methodology and data. The results are presented and interpreted in section 4 and finally section 5 concludes.

2. Review of Literature

2.1 The Issue of Underpricing

The first day closing prices are often higher than the offer price of IPOs representing the situation called underpricing. A lot of studies have empirically concluded the existence of high levels of underpricing of IPOs. Among them are Allen and Faulhaber (1989), Chemmanur (1993), Ibbotson and Ritter (1995), Miller and Reilly (1987), Abdul-Rahim and Yong (2010), and Ritter and Welch (2002). Furthermore, previous studies argue that underpricing is a worldwide phenomenon. Engelen and Essen (2010) investigate 2920 IPOs in 21 countries and provide that underpricing is present in 20 out of 21 countries.

The offer price of an IPOs is determined through a rigorous process. Number of parties are involved in the IPO process such as the issuer, investors, underwriters/investment bank, research analysts and auditors and each party works to the best of its interest. The process of IPO is also governed by specific laws in different countries. The literature has revealed different explanations for underpricing behavior.

One explanation is represented by Winner's Curse Hypothesis. Generally when an IPO is successful, the demand for the stock will be higher than the supply. In this situation each investor would receive only a rationed number of shares. On the other hand if the IPO is not very successful, the demand falls short of supply and you receive your full order. In other words you "win" (forced to buy all shares) if the market does not assign high value to the IPO and the price goes down. The implication of "Winner's Curse" hypothesis is that underwriter has to underprice the IPO in order to induce less informed investors to participate in the process of IPOs. Empirical support for this hypothesis has been provided by Barry and Jennings (1993) for the US, and Aggarwal et al. (1993) for Latin America among others.

An alternative explanation is Certification Hypothesis. According to this hypothesis, uncertainty in the IPO process is reduced due to the certification role of investment bankers and auditors. This hypothesis is empirically supported by Affleck-Graves et al. (1993), Lin (1996), Chishty et al. (1996) and Hamao et al. (1998).

Signaling Hypothesis is also used frequently to explain underpricing behavior. According to the Signaling Hypothesis IPOs are underpriced by firms to signal their quality. Higher quality firms underprice an IPO in order to be able to receive higher returns from their subsequent security offerings. Hence, underpricing is a signal that a firm will reissue. This theory may be applicable to some cases, however, it couldn't find widespread empirical support. Alvarez (2015) studies the effect of IPO return volatility on the valuation of firms for Spanish market. Her results support the asymmetry of information hypothesis and the hot IPO market hypothesis. However, there was no conclusive evidence in support of the signaling hypothesis for underpricing. Lowery et al. (2008) conclude that IPOs of the firms with high information asymmetry are more volatile.

Still another explanation is given by Fads (Impresario) Hypothesis. According to this hypothesis higher return on an IPO is not due to some systematic underpricing rather it is due to its overvaluation by the investors and it may lead to long term underperformance. Empirical support for the "Fads Hypothesis" is provided by Shiller (1990) for the US, Aggarwal et al. (1993) for Latin America and Levis (1993) for the UK. Durukan (2002) explored the determinants of IPO returns for Istanbul stock market using a multivariate regression and found evidence in support of the Fads hypothesis and the Winner's Curse hypothesis. However, she couldn't find any evidence of long run underperformance. Aggarwal and Rivoli (1990) find support in favor of Fads Hypothesis. They argue that IPOs are not undervalued by the underwriter rather they are overvalued by investors or fads in early aftermarket trading.

Furthermore, one reason of high level of IPO underpricing is represented by institutional regulations. Chan et al. (2004) find abnormally high levels of IPOs underpricing in China. Due to highly regulated market and government control, the tightly managed supply of IPOs in China fails to meet the demand leading to overpricing by the investors. A large portion of equity is retained by the state showing that the cross-sectional variations of abnormal returns can be explained by some institutional characteristics, including the percentage of equity retained by the state and legal entities.

Additionally, there is a debate around the role of investor sentiment in underpricing and market under and over reaction. Chang et al. (2012) define investor sentiment as investors' opinion driven by an emotion based on a belief about future cash flows and risk. Classical theory (Friedman, 1953; Fama, 1965) negates the role of sentiments in determining stock prices. However, more recent evidence suggests a significant role for the investor sentiment in the stock market. Stock prices fluctuate around their fundamental value due to arbitrage (Corredor, 2013). There is continuing evidence of market under and over reaction. De Long et al. (1990) modeled the impact of sentiment on stock prices. According to them, due to noise trading an element of risk is created that has its price in terms of underpricing.

Baker and Wurgler (2006) define investor sentiment as investors' opinion, optimism and pessimism and their tendency to speculate about the future performance of a certain stock. Their results show that investors may overprice or underprice stocks due to high or low sentiment. According to them the sentiments may affect one specific stock rather than affecting the whole market. Baker and Wurgler (2006) find that securities with highly subjective valuations are more vulnerable to the investor sentiment. The authors form a composite sentiment index and find that when investor sentiments are low, subsequent returns for under-established firms are relatively high. On the other hand when investor sentiment is high, a relatively lower return is earned by these categories of stock. Their results show that well established firms are less affected by investor sentiment.

Schmeling (2009) and Dergiades (2012) studying different industrialized countries, find that investor sentiments have significant impact on the stock returns. Campbell et al. (2008) also study the impact of investor sentiment on the IPO valuation. They find that underpricing is positively correlated with investor sentiment and information asymmetry. Derrien (2005) uses large individual investors' demand, as a proxy for investor sentiment, concludes that high IPOs prices, large initial returns, and poor long-run performance are caused by investor sentiment. Lee et al. (2002) find that Investors' Intelligence Sentiment Index positively affects stock excess returns significantly. They show that investor sentiment is a systematic risk which can be priced.

2.2 The Determinants of IPO Underpricing

Determinants of underpricing has been the subject of most research on IPOs. However, since the issue is complex, there are different explanations for factors affecting underpricing. Many studies explore different firm related factors and some market characteristics.

The role of accounting information and financial parameters in IPOs pricing has been investigated by a number of studies. Kim and Ritter (1999) support the role of historical accounting information in the price determination process. Similarly several other studies prove the explanatory power of these factors for the IPO pricing. For

example Beatty et al. (2000), Ohlson (1995), Frankel and Lee (1998), Bateni and Asghari (2014) and Francis and Schipper (1999) emphasize the importance of different accounting factors in determining the IPO prices. Kim and Ritter (1999) find that IPO underpricing is highly influenced by the P/E multiples using forecasted earnings of the firm. Beatty et al. (2000) examine the impact of accounting information on the price of IPOs. They find that about eighty percent of the variation in IPO offer prices is caused by accounting book value, earnings and revenue, as well as some other firm and market characteristics. In the risk estimation regressions, earnings and book value are the most significant explanatory variables. Bateni and Asghari (2014) explore the determinants of IPO pricing for Tehran Stock Market. According to their results only P/E variable is the most important in explaining variation in initial offering price with the highest impact on it. Banerjee (2015) analyzed Indian stock market focusing on graded IPOs and found that their underpricing is strongly affected by the financial parameters of the firm. Klien (1996), Kim and Ritter (1999), and Hand (2000) find support for the idea that accounting information affects the pricing of IPOs (Beatty et al., 2000).

Chiraphadhanakul and Gunawardana (2005) find that company specific factors like firm size, three year profit to equity (PE) ratio, debt ratio, and return on average of 3 years return are important determinants of IPOs initial pricing in Thailand. According to Firth (1998) and Jog and McConomy (2003), investors also depend on profit forecast of the firm in pricing and subscribing to new issues.

Other firm-related characteristics were also investigated for their role in the IPOs pricing. Soet and Ngugi (2013) study the factors that determine the underpricing of IPOs. They find that fractional ownership explains a lot of variation in firm valuation. Usman et al. (2014) find that ownership structure like industrial and financial ownership largely predict the underpricing of IPOs. Another important factor is the size and type of the IPO firm. Well-established firms enjoy less underpricing whereas under-established firms face a much higher degree of underpricing. Acqua et al. (2015) study Italian stock market and find the existence of underpricing of IPOs caused by various factors including firm size, aftermarket risk, market demand, financial crisis and shares retention by existing shareholders.

Other factors that may affect IPOs pricing relate to other parties involved in the IPOs process. For example, Roosenboom (2012) finds out that a certain percentage of underpricing is caused by intentional price discount given by underwriters. Loughran et al. (1994) study IPO behavior in 25 countries and find evidence of higher IPO underpricing in developing countries than in developed countries. In their opinion it could be because markets in developed countries are more informationally efficient. Some of the studies carried out in emerging markets have looked into the factors affecting the pricing behavior of IPOs. Soet and Ngugi (2012) find out that both the underwriters and the ownership are important factors in underpricing of IPOs for Kenya.

There are limited studies investigating IPOs in the region. For example, Alanazi and Al-Zoubi (2015) study IPOs markets in the Gulf countries and find abnormally high underpricing of IPOs. They attribute it to the institutional factors and regulations of the regulatory authorities that block foreign investors from investing in IPOs. According to Hopp and Dreher (2013) the underpricing prevails at a larger scale if foreign investors are banned from investing in IPOs. Al-Hassan et al. (2010) find the existence of high IPO returns of about 290% of IPO pricing in the Gulf countries. According to them the investors' over optimism at the time of IPO could be the main reason behind this abnormal return. Mayes and Alqahtani (2015) find the existence of a high extent of IPO underpricing close to 267% Saudi Stock market. Using limited IPO data from 2004 to 2010, they find significant impact of Sharia-compliance on the initial returns. According to them the underpricing is significantly reduced if the companies are Sharia-Compliant. However, they use Alrajhi bank classification for Shariah compliant companies which may be biased from the point of view of some Shariah scholars. Similarly, Alqahtani and Boulanouar (2017) estimate the demand of IPOs represented by oversubscription ratio for a short period of 2004-2011. They find negative effect of Shariah compliance on the demand of IPOs which is counterintuitive and can't be explained. Another paper by Alqahtani and Boulanouar (2016) addresses the issue of Shariah compliance in the insurance industry of Saudi Arabia. They find a very high level of underpricing equal to 455 percent which they attribute to monopsony power of insurance underwriters. They fail to find any significant impact of Shariah compliance on IPOs pricing.

Compared to the above mentioned studies about Saudi stocks, current study covers IPOs for an ample period from 2004 to 2017 which makes this study more up-to date. It also employs a more comprehensive model incorporating all the important explanatory variables. It addresses the issue of Shariah compliance in a more objective way by employing the existence of Shariah board as a proxy for Shariah compliance.

3. Methodology and Data

The data covers IPOs in Saudi stock market during the period from 2004 to 2017 where around 105 companies have initially offered public stocks. The data has been collected from Tadawul, Argaam and Gulfbase databases. Further detailed information has been collected from the prospectuses of the IPOs and their annual reports. The research considers significant factors that have been suggested by prior research as well as some other factors relating to Saudi investment environment. There is one dependent variable, initial adjusted return of IPO and several dependent variables. Our focus is on the phenomenon of underpricing that is why we take underpricing as the dependent variable.

Multiple regression method has been employed to examine the relation between the selected factors and the initial return of IPOs. Similar models have been used by Chishty et al. (1996), Hammed and Lim (1998) and Durukan (2002) among others. The model is built as follows:

$$\text{Adj-RET} = f(\text{AF, ROE, SF, D/E, SB, Prem, Stock, Over-Subs, RA, Und})$$

Where the definitions of variables are given in Table 1

Table 1. Definitions of variables

Variable	Definition	Data Source	Expected Sign
Adj-Ret	Return of the IPO adjusted for stock performance.	Tadawul	
AF	Age of firm in years at the time of IPO.	IPO Prospectus	-
SF	Value of total shares stated in Saudi Riyals calculated by multiplying the offer price with the total number of shares.	IPO Prospectus	-
D/E	Debt to equity ratio in the firm's capital structure in the year prior to the IPO.	IPO Prospectus	+
SB	IPOs with a Shariah Board. Incorporated as a dummy variables where non-Shariah board firms take the value equal to one and firms with Shariah Board equal to zero.	IPO Prospectus	-
Prem	Premium to offering price calculated as offering price minus face value of the stock divided by face value.	IPO Prospectus	-
ROE	Return on assets calculated as a ratio of net income before IPOs to total equity.	IPO Prospectus	-
Over-Subs	Number of times the issue has been oversubscribed.	Argaam & Gulfbase	+
RA	Reputable Auditors. A dummy variable with value one when the IPOs was audited by Big 4 audit firms and zero otherwise.	IPO Prospectus	-
Und	Underwriters. Dummy variable value 1 if the underwriter was from top 7 and 0 otherwise.	IPO Prospectus	-
Stock	Variation in Saudi Stock Market Index during the day of IPO. It represents the market performance	Tadawul	+

3.1 Measurement of Variables

Adjusted return is the dependent variable and is the focus of this research. We focus on the first day gain from the stock price and adjust it for the stock market performance of that day. The measure used is quite common and consistent with the ones used by Acqua et al. (2015) and Alanzi and Al-Zoubi (2015) among others. Adjusted return is calculated according to the following formula:

$$\text{Adj-Ret} = \frac{\text{First Day Closing Price} - \text{Offer Price}}{\text{Offer Price}} - \text{Stock}$$

3.2 The Hypothesized Impact

The expected impact of the above independent variables on the dependent variable is given as follows: The higher values of AF (age of firm) and SF (size of firm) make an IPOs less risky and hence should lead to lower underpricing.

As a result they are expected to negatively affect the adjusted return (Abdul-Rahim and Yong, 2010; Chang et al., 2008 etc.). According to the theory, debt to equity ratio, indicates the riskiness of a company and expected to positively affect Adj-Ret. Whereas return on equity is expected to negatively affect Adj-Ret.

The variable Over-Subs (over-subscription) represents the demand side and hypothesized to positively affect Adj-Ret (Chowdhry and Sherman, 1996; Abdul-Rahim and Yong, 2010; Mays and Alqahtani, 2015). The next variable, Prem (premium) is based on the offer price which is determined by the underwriter. According to supply and demand theory model of IPOs, (Alanzi, et al., 2016), a higher premium causes lower demand by investors and lower first day return. A higher premium takes away the chances of higher Adj-Ret leading to negative relationship between them. RA (reputed auditor) and Und (underwriter) decrease the uncertainty level of an IPOs and should lead to lower Adj-Ret (Albring et al., 2007 and Wang and Wilkins, 2007).

Stock represents the market conditions. IPOs are expected to perform better during good stock market conditions so it is expected to positively affect Adj-Ret. Finally, the key variable SB (Shariah board) decreases the element of uncertainty. An IPO with SB is hypothesized to have a lower Adj-Ret.

4. Interpretation of Results

4.1 Descriptive Statistics

The results show abnormally high underpricing of IPOs in Saudi stock market. It shows that the offering prices of firms going public are underpriced around 226.48% on average which is one of the abnormally high underpricing averages in developed and developing markets. This could be reflecting some characteristics of the institutional elements of Saudi stock markets including the domination of individual investors (Tadawul, 2014), limited opportunities for investors and regulations relating to foreign investors, industry governance and transparency (Simpson, 2008).

Table 2. Descriptive Statistics

	ADJ-RET	AF	D/E	OVER-SUBS	PREM	RA	ROE	SB	SF	STOCK	UND
Mean	2.2575	12.768	0.6141	5.5439	35.482	0.8190	0.0660	0.6285	4762.6	0.0071	0.6190
Median	0.7809	7.1013	0.3001	4.4500	0.0000	1.0000	0.0477	1.0000	1260.0	0.0080	1.0000
Maximum	16.924	64.539	8.3956	50.000	90.909	1.0000	0.5195	1.0000	90000	0.1756	1.0000
Minimum	-0.0405	0.0000	0.0051	1.1000	0.0000	0.0000	-0.4457	0.0000	80.000	-0.1483	0.0000
Std. Dev.	3.3121	14.390	1.0076	5.6629	37.777	0.3868	0.1772	0.4855	12926.9	0.0784	0.4879
Skewness	2.1225	1.2142	4.9243	5.1438	0.1897	-1.6575	-0.0176	-0.532	4.90131	0.0863	-0.490
Kurtosis	7.5748	4.1401	35.755	38.325	1.1407	3.7472	3.1342	1.2832	28.2525	2.7436	1.2404
Jarque-Bera	170.40	31.487	5118.3	5922.5	15.754	50.519	0.0842	17.851	3210.3	0.4178	17.753
Probability	0.0000	0.0000	0.0000	0.0000	0.0004	0.0000	0.9587	0.0001	0.0000	0.8114	0.0001
Sum	237.05	1340.7	64.479	582.11	3725.6	86.000	6.9352	66.000	500069	0.7518	65.000
Sum Sq. Dev.	1140.9	21537.6	105.59	3335.1	148419	15.562	3.2675	24.514	1.74E+10	0.6395	24.762
Observations	105	105	105	105	105	105	105	105	105	105	105

Saudi stock market is still growing and the number of listed companies does not satisfy the real demand. For example although the number of listed companies has doubled during the period of the study, the number of listed companies in Saudi stock market is still lower than the other developing or regional markets even though its value is a lot above these markets. For example, the number of listed companies in Kuwait as well as UAE is much greater than that of Saudi Arabia. Saudi Arabia is at the fifth position in terms of ratio of number of listed companies to market capital which is only 0.41, whereas this ratio is 6.4 in Kuwait and Oman. Hakim (2008) maintains that there is a need for a more reasonable balance between the limited supply of stocks and the large amount of liquidity pursuing this supply. In his opinion high IPOs oversubscription underscores the limited number of shares available.

4.2 The Regression Results

The regression is statistically significant with a high F-value and low significance probability of F. The coefficient of determination is 57 percent which is good considering that we are using the cross-section data. The regression results

are obtained and summarized in table 3.

The results of standardized coefficients show the relative impact of independent variables on the dependent variable. According to the results, reputed auditor has the highest impact on the Adj-Ret, followed by premium and over-subscription. Shariah board, stock variation and underwriter are the next most important determinant of the first day adjusted return. The coefficients of the rest of the variables are either very small or statistically insignificant.

Table 3. Multiple Regression Results

		Coefficients ^{a,b}					
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
Model		B	Std. Error	Beta			
1	AF	-.006	.031	-.026	-.177	.860	
	SF	-4.446E-5*	.000	-.153	-1.826	.071	
	Prem	-.025*	.014	-.324	-1.838	.069	
	ROE	2.366	2.623	.112	.902	.369	
	D/E	-.447	.432	-.132	-1.034	.304	
	Stock	13.449***	3.621	.264	3.714	.000	
	SB	-1.354*	.689	-.269	-1.964	.052	
	RA	2.940***	.551	.666	5.336	.000	
	und	1.199**	.523	.236	2.293	.024	
	Over Subs	.163***	.055	.322	2.965	.004	
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F-Value	Significance of F-Value
1	.755	.569	.542	2.75634	1.784	12.561	0.0000

a. Dependent Variable: Adj-Ret

b. Linear Regression through the Origin

Note:***, **and * statistically significant at 1%, 5% and 10% respectively.

According to the regression results, the coefficient of the variable, over-subscription is positive and statistically significant as hypothesized. It represents the demand side of investors. This result is in conformity with previous studies like Chowdhry and Sherman (1996), Abdul-Rahim and Yong (2010), and Mays and Alqahtani (2015).

The variable, premium to offering price, is calculated as offering price minus the face value of the stock divided by the face value. The premium that is assigned by the underwriter depends on so many factors and may not be reflecting the intrinsic value of the company.

Underwriter may be giving specific discount to cover risks associated with certain type of stock market such as emerging stock market that are more risky due to weak structure or inefficient and asymmetric information (Simpson, 2008). According to the results, the regression coefficient for premium to offering price is negative and statistically significant which indicates that a high premium is associated with smaller first day return on IPO and vice versa. This result is logical because the IPO sold at already inflated price gives a signal to investors that they should not expect the price to increase very much, taking away the possibility of first day abnormal returns. Another reason of this negative relation could be that when the premium is low, the value of the shares offered is lower and the market performing good, investors will be more likely to price the new stock above its offering price. This may reflect to some extent the explanation given by Fads (Impresario) Hypothesis. According to this hypothesis higher return on an IPO is not due to some systematic underpricing rather it is due to its overvaluation by the investors and it may lead to long term underperformance. Durukan (2002) and Aggarwal and Rivoli (1990) argue that IPOs are not undervalued by the underwriter rather they are overvalued by investors or fads in early aftermarket trading.

With respect to the importance of accounting numbers in determining IPOs price and performance the results show some different results. Debt to equity ratio in the firm's capital structure in the year prior to the IPO indicates the degree of riskiness of the firm and hypothesized to have positive effect on Adj-Ret. However, according to the

regression results, the coefficient of D/E ratio is negative but statistically insignificant which means Saudi investors don't consider the degree of indebtedness of the firm going public as an important factor. Many studies including Durukan (2002) show this variable to be statistically insignificant.

The results show a strong impact of daily stock market index variation, that measures stock market performance, on the IPO return. The estimated coefficient of stock market index is the biggest among all other coefficient and is statistically significant. It shows that stock market performance is very important in determining IPO return. This result is expected as hypothesized as most of the previous studies have also revealed such findings (Abdul-Rahim and Yong, 2010; Acqua, 2015, etc.).

The role of underwriters has been incorporated in the study to investigate whether underwriting by important underwriters affects the degree of underpricing. The results show that underwriter reputation has positive effect on the underpricing and it is statistically significant. This result is contradictory to our hypothesized negative relationship. This may be attributed to intentional price discounts on the part of underwriters in Saudi Arabia to avoid risk. This result is in conformity with the results of Roosenboom (2012) and Soet and Ngugi (2012) which report that both the underwriters and the ownership are important factors in underpricing of IPOs.

The study also includes a dummy variable for IPOs with reputable auditors. The coefficient is positive and statistically significant which is also counter to our hypothesized negative relationship. It could be because investors trust reputable names in auditing and respond positively to the IPOs with big auditors on the demand side. Because of the nature of the auditing market, big auditors may be very important to boost investor confidence.

According to the regression results, the coefficient on the age of firm variable is negative as hypothesized even though statistically insignificant. This result implies that older firms are less prone to underpricing. This result perfectly makes sense because an older firm is well known to involved parties and there is little element of uncertainty. So the offer price is fixed such that there is little chance of high levels of first day gains. This result is in conformity with Lowry et al. (2008) and Alvarez (2015) among others.

Firm size has been measured as offer price multiplied by the total number of shares. The coefficient of this variable is significant but very small in size. It has negative impact on the dependent variable as hypothesized implying that for larger firms there is lower degree of underpricing. This result is in conformity with Abdul-Rahim and Yong (2010) and Chang et al. (2008) among others. According to the results, the coefficient of ROE is positive which is against the hypothesized effect, however, the coefficient is statistically insignificant.

4.3 Shariah Compliance:

One most important motivation behind carrying out the current study was to analyse the impact of Shariah compliance on the first day returns of IPOs. Our hypothesis was that in an Islamic society like Saudi Arabia, investors are more enthusiastic about the companies who are Shariah compliant.

Current study classifies companies based on whether they have a Shariah board assuming that the companies with Shariah board are Shariah compliant and involved in Islamically permissible businesses. Out of one hundred five IPOs, thirty nine have Shariah Board while sixty six are operating without it. There is a general perception that some institutions may be involved in interest based transactions or other activities not permissible by Islam. One of the main objectives of this study was to check if this perception plays any role in affecting the IPO return. The existence of a Shariah board provides information and confidence to investors and decreases the element of risk leading to lower levels of Adj-Ret.

The results indicate that the coefficient of the Shariah compliance is statistically significant. Shariah compliance is negatively related to the first day adjusted returns which clearly shows that investors are conscious about Halal and Haram while investing in the stock market. This is an important result of this study. Lower levels of uncertainty due to presence of a Shariah board boosts the confidence of Saudi investors and leads to lower levels of underpricing. Our results are also consistent with the results of Mayes and Alqahtani (2015) who find negative relation between Shariah compliance and underpricing. Since Saudi society is an Islamic conservative society, therefore investors may affect the pricing of IPOs whether during the process of setting the offer price or during the first day trading and the number of participating investors.

5. Summary and Conclusions

This study tries to explore the important factors that determine the first day abnormal return in the IPOs market in Saudi Arabia. Due to the stock market restrictions, Saudi IPOs are associated with abnormal first day returns in the world. The study employs ten important determinants out of which seven turn out to be statistically significant.

Overall demand side factors turn out to be the most important determinants of first day abnormal returns. The results of standardized coefficients show that reputed auditor has the highest impact on the Adj-Ret, followed by premium and over-subscription. Shariah board, stock variation and underwriter are the next most important determinant of the first day adjusted return. The most important result is that investors place more confidence in the firms with a Shariah board leading to negative impact of Shariah based IPOs on Adj-Ret. This result is consistent with the results of Mays and Alqahtani (2015) about the negative impact of Shariah compliance. Other firm related factors turn out to be statistically insignificant.

Due to the nature of Saudi society, investors are reluctant to participate in Haram investments such as saving accounts or interest bearing investments and rigid regulations for investments. In this situation, Saudis find IPOs opportunities as the most appropriate channel for investments.

Also, Saudi stock market is still growing and the number of listed companies does not satisfy the real demand. For example although, the number of listed companies has doubled during the period of the study, the number of listed companies in Saudi stock market is still lower than the other developing or regional markets even though its value is a lot above these markets. That is why CMA is encouraging more companies to go public to absorb the available saving and wealth of the society.

The phenomenon of first day IPO abnormal returns in Saudi stock market shows the existence of market imperfections. Riskiness of IPOs leading to higher levels of underpricing can be addressed by improving the information symmetry and transparency conditions. On the demand side, Adj-Ret can be brought to normalized levels by issuing Shariah compliant IPOs. The paper provides a guideline to securities commissions as well as investment banks or underwriters in preparing IPO of a company, particularly in setting price for new company shares.

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Notes

Note 1. Shariah refers to set of rules and regulations ordained in Islamic sources of legislation, Quran and Sunnah (the teachings of Prophet Mohammad (PBUH)).

Note 2. A Shariah board consists of Islamic scholars appointed to foresee the business activities of an organization in order to make sure that it is not involved in any activities contrary to Islamic teachings.