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Published

2011

Journal Title

Review of Middle East Economics and Finance

DOI

[10.2202/1475-3693.1309](https://doi.org/10.2202/1475-3693.1309)

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Review of Middle East Economics and Finance

Volume 7, Number 1

2011

Article 5

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Recommended Citation:

Alanazi, Ahmed; Liu, Benjamin; and Forster, John (2011) "Saudi Arabian IPOs and Privatized Firms Profitability," *Review of Middle East Economics and Finance*: Vol. 7: No. 1, Article 5.

DOI: 10.2202/1475-3693.1309

Saudi Arabian IPOs and Privatized Firms Profitability

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Abstract

A sample of 21 privatized and IPO Saudi firms has been examined in this paper. Consistent with the relative literature on privatization and IPOs, we have documented two contrasting outcomes. First, we found that Saudi State Owned Enterprises SOEs and the private joint stock companies are showing a large improvement after-IPO as compared to the pre-IPO financial performance. On the contrary, we found a financial performance deterioration among the family owned businesses or the limited liability type of firms after the IPO compared to the pre-IPO level as measured by the return on assets (ROA) and return on sales (ROS).

KEYWORDS: Initial Public Offerings, privatization

Author Notes: Ahmed Alanazi acknowledges financial support from The Program of the Custodian of the Two Holy Mosques for foreign scholarship, PhD Scholarship in Finance at Griffith University. The authors gratefully acknowledge suggestions by two anonymous referees.

1. Introduction

The main objective of this paper is to assess Saudi firms' profitability after they go public via an Initial Public Offering (IPO). Since 2003, the Saudi Capital Market, the Tadawul, has undergone substantial changes and restructuring. The number of the listed firms in the stock market has doubled in just a few years, jumping from about 70 firms in 2003 to 129 firms in 2009. The Saudi market index, TASI, rose from 2,500 points in 2003, to as high as 20,000 points in 2006. The market was ranked ninth among the emerging exchange markets with \$74.86 billion in market capitalization. This was just behind major exchanges such as Singapore, and far ahead of Thailand, Istanbul, and Jakarta (WFE, 2008).

Unfortunately the bubble exploded in 2006, when the TASI index fell to as low as 6000 points, affecting almost everyone in Saudi Arabia. Four years of a continually growing Saudi market had been enough to attract most Saudi citizens to invest in it. Many citizens lost much of their savings in what turned out to be a risky speculation. In response to the citizens' complaints, the Saudi government appointed a new market chairman, Abdulrahman Al-Tuwajri who made deepening the market a primary objective, primarily by increasing the number of the listed firms. This policy meant there would be more IPOs.

We analyse the impact of IPOs on the Saudi firms' profitability using accounting measures. Three types of firms that underwent the IPO process in Saudi Arabia are identified here. These are: State Owned Enterprises (SOEs), private joint stock firms, and private limited liability (usually family owned) firms. The choice of Saudi Arabia was motivated by the clustering of IPOs that started in 2003. Furthermore, new regulations applied by the Tadawul regulatory body (The Capital Market Authority) have created a unique opportunity to study the relationship between a firm's IPO and its performance in Saudi Arabia. However, a major research obstacle was that Saudi firms apparently value confidentiality very highly. To this extent Al-Barrak (2005) found only one firm to co-operate with his research, and then only providing the needed information on the condition that the firm's identity was not revealed. One of the Tadawul's new listing requirements, however, is greater disclosure of information to potential investors when going public. The second reason is that Saudi Arabia is the largest economy in the Middle-East. Consequently any results relating to Saudi IPOs will be potentially useful in analyzing emerging markets and their economies in general and especially those in the Middle-East.

Using a matched pairs' methodology, we document several important findings. First, we observe a substantial profitability improvement among the government privatized firms. Both government companies, the Saudi Telecommunication Company and the National Cooperative for Insurance Company show a profitability improvement as measured by the return on assets

(ROA), and the return on sales (ROS). Although too small for statistical significance in isolation, this is consistent with Megginson, Nash and Randenborgh (1994) on the positive impact of privatization on previously state owned firms' performance.

We also document a big difference in the profitability between two types of private firms, i.e. limited liability firms and the joint stock firms. When private firms go public through an IPO, thereby converting from a limited liability firm into joint stock firm, they generally exhibit significant declines in profitability after the IPO. On the other hand, when privately held joint stock companies go public, they showed improved performance after the IPO compared to their pre-IPO levels, similar to the government privatized firms. This finding raises the issue of the importance of capital structure in determining the firm's profitability, especially after the IPO. The main difference between these two types of private firms is that in the limited liability type, the owners directly own percentages of the firm whereas, in joint stock companies, the investors own shares. The profitability decline among the limited liability corporations as measured by the return on assets ROA and the return on sales ROS started from the year of the IPO and increased in magnitude in subsequent years.

The paper proceeds as follows. In Section 2 we provide a brief background on Saudi Arabia and its capital market development. Section 3 reviews the relevant literature, while data and methodology are discussed in Section 4. Section 5 provides the empirical findings and their analysis. The conclusions are in Section 6.

2. Saudi Arabian Economic Overview

2.1 Saudi Arabian economic overview

The economic system in Saudi Arabia is based on free enterprise. Saudi citizens can participate in private economic activities and have the right to take advantages of their enterprise. The Saudi Arabian economy is oil-based, with the largest proven conventional oil reserves (about quarter of the globe's oil reserves). The country is the largest oil producer in the world, with a capacity of 10 million barrels per day. The petroleum sector contributes approximately 75 per cent of the nation's total government revenue, 40 per cent of the country's GDP, and 90 per cent of its export earnings (Al-Otaibi, 2006; Al-Barrak, 2005).

In the early 1990s, the Saudi government started to encourage large corporate participation in the economy to diversify the economic base and to reduce reliance on oil prices and oil revenues, oil being one of the most volatile commodities in the world. Thus, in July 2008 the oil price had reached the historical high of US \$147/barrel, while in 1998 it had plummeted to an historical

low of approximately US \$8/barrel. This oil price instability obliged the government to take several economic initiatives, including the establishment of the Supreme Economic Council (SEC) to implement a privatization program. As a result, some government enterprises have been partially sold to the public through the IPO mechanism. For example, the Saudi government privatized the telecommunication company, the Saudi Telecommunication Company by selling 30 per cent of the company's shares to Saudi citizens in 2003. In 2005, 70 per cent of the National Co-operation Company for Insurance was privatized. The Saudi Capital Market Authority was established in 2003 to supervise the Tadawul and to develop it (CMA, 2009). The existence of a stable and efficient capital market was necessary for the privatization program and for the resulting IPOs, but will also eventually support the government's economic diversification objectives. Table 1 shows some background Saudi Arabia economic data.

Table 1. Saudi Arabia Statistical Economic Facts

Indicator	2003	2004	2005	2006	2007
Population (million)	22.02	22.67	23.1	23.68	24.24
Foreign Exchange Rate (SR/\$)	3.75	3.7501	3.7502	3.7501	3.7464
GDP (SR billion)	804.6	938.8	1182.5	1335.6	1430.5
Interest Rates on Domestic currency Deposits	1.63	1.73	3.75	5.02	4.79
Inflation Rate	0.6	0.3	0.7	2.2	4.1
Average price of Arabian light oil (\$US)	27.69	34.53	50.15	61.05	68.74
Actual government revenue (billion SR)	293	392.3	564.3	673.7	642.8
Actual government expenditure (billion SR)	257	285.2	346.5	393.3	466.2
Ratio of Budget deficit/surplus to GDP	4.5	11.4	18.4	21	12.3
Export of Goods (billion SR)	349.7	472.5	677.1	791.3	877.5
Import of Goods (billion SR)	138.4	167.8	223	261.4	338.1
Current Account (billion SR)	105.2	184.9	337.5	371	356.3

Source: Saudi Arabian Monetary Agency SAMA, 2008.

2.2 Saudi stock exchange market development

Like many other developing countries, the Tadawul is relatively new compared to markets in the developed world. The Tadawul is classified as an emerging market belonging to the Middle Eastern and North African region (MENA region) (Al-Barrak, 2005). Saudi joint stock firms' roots go back to the mid 1930's when the

"Arab Automobile" company was established as the first joint stock company. By 1975 the number of public companies had only reached 14 due to the rapid expansion in Saudi economy, as well as the Saudization of part of the foreign banks operating in the country. However, the market was 'unofficial' and it was not until early 1980s that the government began regulating it through a joint Ministerial Committee (The Ministry of Finance and National Economy, The Ministry of Commerce, and The Saudi Arabian Monetary Agency, SAMA).

As already indicated, in 2003, the CMA became the regulatory body for the Tadawul. The CMA is an independent government authority that reports directly to the Saudi Prime Minister. The CMA enjoys authority for regulating and developing the capital market; protecting investors and general public from unfair practices; achieving efficiency and transparency in securities transactions; monitoring full disclosure of information related to shares and their issuers, and monitoring shares trading (CMA, Tadawul, 2009). Developing the Tadawul was given a high priority for many reasons. First, it was believed that the stock market would help protect established family owned businesses from disappearance as the original entrepreneurs die. Indirectly this would also help create a professional managerial class, as opposed to a retired class. Second, the existence of the capital market provides investment opportunities for those who have neither managerial nor financial capabilities to establish businesses. Third, the Tadawul is seen as a vehicle for wealth distribution among citizens, partly because IPO shares usually are underpriced.

At present, the Tadawul consists of 129 firms divided into 15 industries. By comparison, there are 3,300 firms listed on the London Stock Exchange, 2002 on the Australian Stock exchange and 73 on the Irish Stock Exchange. More pertinently for the Middle East there are 430 on the Egyptian exchange and 319 in Istanbul (World Federation of Exchanges WFE, 2009). The Saudi industries and numbers of firms are shown in Table 2.

Table 2. Tadawul Industrial Categories and Numbers of Firms

Number	Industry	Number of Firms
1	Banking & Financial Services	11
2	Petrochemical Industry	13
3	Cement	8
4	Retail	8
5	Energy & Utilities	2
6	Agricultural & Food Industry	15
7	Telecommunication & Information Technology	4
8	Insurance	22
9	Multi-Investment	7
10	Industrial Investment	11
11	Building & Construction	12
12	Real Estate Development	7
13	Transportation	4
14	Media & Publishing	3
15	Hotel & Tourism	2
Total		129

Source: Saudi Stock Exchange Market (Tadawul, 2009) السوق الماليه السعودي, تداول

3. Literature Review & Hypotheses Developments

3.1 Introduction

There has been much research on privatization and related issues such as its impact on firms' performance. Nevertheless, Megginson and Netter (2001), in a detailed literature survey, indicate three areas for further development. These are: the need for more case studies analysis at the country level, the need for accurate measurement of privatization's impacts on employment, and the necessity for additional empirical studies at the micro-level, particularly on its' effects on company performance. In addition to these three areas, it can be argued that there are insufficient studies on emerging markets, as opposed to developed markets such as those in the USA and Europe. Kim, Kitsabunnarat and Nofsinger (2004) claimed that their study of Thai IPOs was the first to examine the performance of the firms after going public in the context of an emerging market. Even more pertinently, Al-Barrak (2005) claimed his study of Saudi Arabian IPO motivations, barriers and their effects was the first in the Middle-East.

3.2 The rationale for privatization

Despite the fact that many state enterprises have been productive and profitable, many more have been criticized for being inefficient and incurring heavy financial losses or both. Therefore, one rationale for privatization is performance improvement by exposing them to market forces. Furthermore privatization generates immediate revenues for governments; improves firms' performances by reducing the bureaucratic interference in their management, and attracts greater foreign capital and investment (FDI). This also improves the country's image, many investors perceiving privatization as a sign of commitment to liberalization and market economy. This is especially important for emerging economies. And some countries adopted privatization as a way to funding and support from world agencies such as the World Bank (WB) and the International Monetary Fund (IMF) (Megginson and Netter 2001; Perotti, & van Oijen, 2001).

3.3 Private firms' motivations for IPOs

In order to appreciate the motivations for private firms to go public we discuss its advantages and disadvantages. Pagano, Panetta, and Zingales (1998) summarized the pros and cons as follows. One advantage is overcoming borrowing constraints by accessing equity sources of finance in the stock market, instead of expensive bank debt finance. This also allows greater bargaining power with banks, as such firms then have alternative sources of borrowing. A third advantage is portfolio diversification, as the entrepreneurs can use the capital raised at its discretion compared to bank debt financing. Market discipline is another advantage, as the owners of a listed firm will be more aware of the danger of hostile takeovers, leading to better managerial decisions. Finally, investors' recognition is greater, as listing the company in the financial market acts as advertising the company. However, undertaking an IPO can bring some unfavorable consequences, such as the adverse selection problem. Due to informational asymmetry between partners, i.e. potential investors do not have the full information available to the owners. Investor wariness in this situation can then lead to the firm be undervalued in the IPO. The empirical evidence for undervaluation is overwhelming, although it is not proven that the adverse selection problem is responsible. There are also substantial administrative expenses and fees and legal costs in going public. These include underwriting fees, stock exchange fees and accounting auditing fees. Finally, there is the loss of confidentiality and lowered tax avoidance (presumably evasion in some cases) abilities, as the firm has to give its secrets and information to the authorities.

3.4 Empirical Evidence on firms' performance after privatization and IPO

Evidence of the insignificance of increases in firm profitability can be found in Cabeza & Gomez, (2007). They examined profitability changes among 58 Spanish companies, finding that profitability increased in the long run, but the effect was unimpressive in the short run. However, the majority of the studies, such as Megginson, Nash and Van Randenborgh, (1994); Wattanakul, (2002), and Gupta, (2001) found significant increases in profitability.

Many articles measure the impact of the IPO on firms' performance. Two types of performance measurements have been used. These are the short and the long-run stock returns performance (see Loughran, Ritter & Rydqvist, 1994), and operating accounting-based performance. Stock return performance in the short and long-run has been the most investigated. Conversely, accounting-based operating performance is less examined (Balatbat, Taylor & Walter, 2004). However, irrespective of the measures of performance used, IPOs' underperformance after issue is evident in almost all studies. We focus on the accounting-based profitability and survey this literature.

Compared to the pre-IPO period, post-IPO underperformance is evident in most accounting measure studies. Jain & Kini (1994) examined 682 U.S firms between 1976 and 1988 and documented a significant decline from the year prior to the IPO to the five years following the listing. Their performance measures were operating ROA and operating cash flows deflated by assets. Similarly, Mikkelsen, Partch & Shah (1997) found a significant decline in post-IPO performance on a sample of 283 firms in the U.S. The situation is similar in the second largest economy in the world. A study on 180 Japanese IPOs by Cai & Wei (1997) found a strong deterioration in the post-IPO performance, similar to findings in the U.S. One interesting facet of IPOs in Japan is that it appears that firms tend to go public when they reach a superior performance and suspect their inability to sustain it in the future, an adverse selection problem with IPO as an exit strategy (Cai & Wei, 1997). Wang (2005) investigated a sample of 747 Chinese firms IPOs. Wang also found a sharp decline in the operating performance as measured by the ROA, the ROS and sales to assets, with China seen as a transitional economy. Wang found a positive relationship between ownership structure change after the issue and the firms' performance, such that when the owners retain the majority of the stocks the firms show a less severe decline.

There is also evidence of post-IPO performance falls among European IPOs. Pagano, Panetta & Zingales (1998) found a decline in the post-IPO performance for Italian firms. They used the pre- and post-IPO performance comparison between to analyse the reasons behind firms' decisions to go public. A study of German and Spanish IPOs found that family owned businesses'

performance declined in the long-run after their IPOs (Jaskiewicz, Gonzalez, Menendez & Schiereck, 2005). Furthermore, Khurshed, Paleari & Vismara, (2005) found, for 411 IPOs on the London stock exchange between 1995 to 1999, that these IPOs were unable to sustain their superior pre-IPO performance in the aftermarket period in the U.K.

In emerging markets, we find a pattern similar to the advanced economies, but with much greater post-IPO performance deterioration. In Thailand firms' post-IPO operating performance reductions are ten times greater than in the U.S. The Thai's IPOs operating performance after three years is found to be 75 percent less than the year before the IPO compared to a 9 percent decline in the U.S IPOs (Kim, Kitsabunnarat & Nofsinger, 2004). In Saudi Arabia Al-Barrak (2005) found a decline in the post-IPO performance, but this was a single firm case study using accounting data. He documented a performance decline in the after IPO period similar to other studies as measured by the return on assets, return on sales, return on equity and many other profitability measurements.

4. Data and Methodology

Following this examination of the literature we propose the following testable hypotheses for the Saudi IPOs:

Hypothesis 1a. Saudi government firms' profitability, as measured by the return on assets (ROA), improves after privatization.

Hypothesis 1b. Saudi government firms' profitability, as measured by the return on sales (ROS), improves after privatization.

Hypothesis 2a. Saudi private firms' profitability declines after the IPO as measured by the return on assets (ROA).

Hypothesis 2b. Saudi private firms' profitability declines after the IPO as measured by the return on sales (ROS).

4.1 Data and Sampling

One of the major difficulties in studying IPOs' performance is data availability and accessibility. This difficulty is more pronounced in most emerging markets given their undeveloped market structures. However, the new regulations applied by the CMA have obliged Saudi firms to reveal their financial statements prior to going public. The resulting prospectuses maintained in the CMA database were accessed for 21 Saudi firms. Financial statements for the post-IPO period were gathered from the Tadawul. Each firm listed in the stock market has to produce quarterly and annual reports.

We restrict our sample to the period between 2003 and 2009, the period when most IPOs took place, 57 companies. For the present purposes we applied several filters.

- Firms that went public as a new establishment (start-ups) were excluded because these firms need a long time frame in order to judge their performance, and there is no prior performance;
- Firms that went public under mergers and acquisitions activities were also excluded.

The two filters reduced the final sample to 21 companies. These firms belong to several industries: telecommunications; insurance; agricultural and food; petroleum retailers; media and publications; manufacturing investment; construction and building; retailing; petrochemicals; transportation, and the real estate development industry. These firms represent 11 industries out of the 15 industries categories on the Saudi stock exchange market (Tadawul, 2009), so the sample is far from homogeneous.

Three types of firms are present in the sample. These are:

1. Government firms: these are the fully owned government firms, which went public (privatized firms) due to the privatization policy program implemented by government (two firms: the Saudi telecommunications company and the national co-operative for insurance);
2. Private Limited Liabilities firms: these are the private firms or family owned firms that went public and became joint stock companies. These firms are the main body of the sample (16 firms in total);
3. Private Joint Stock Companies: These are shareholding firms previously owned by a small number of investors that went public and became publicly traded (3 firms, the SRMG, Albabtain and Sipchem Company).

4.2 Descriptive statistics

Table 3 Panel A shows all IPOs that took place in Saudi Stock Exchange Market. Clearly 2006 and 2007 have the highest IPO activity. This clustering of IPOs is well known in the literature and has been found in many places around the world, such as Italy (Pagano, Panetta & Zingales, 1998). It is important to remember that not all IPOs qualified for this study as the majority of these Saudi IPOs were new establishments. Panel B lists all 21 firms, the year each went public, the industry each operates in, and the percentage of shares being offered to the public (Saudi citizens).

Table 3. Descriptive Statistics

Panel A: Number of Issues in Saudi Arabia	
Year	Number of Issues IPOs
2003	1 company
2004	2 Companies
2005	5 companies
2006	10 companies
2007	25 companies
2008	14 companies
2009	5 companies
Total	62 companies

Panel B: The Research Sample of IPOs in Saudi Arabia

	Company Name	Industry	IPO Year	% of IPO
1	Saudi Telecommunication	Telecommunication	2003	30%
2	Co-operative for insurance	Insurance	2004	70%
3	Almaraie	Agricultural and Food	4-Jul-05	30%
4	Aldrees	Petroleum Retailers	21-Jan-06	30%
5	SRMG	Media & Publication	8-Apr-06	30%
		Manufacturing		
6	Saudi Paper Manufacturing	Investment	24-Apr-06	30%
7	Red Sea for Housing	Construction & Building	12-Aug-06	30%
8	Alhokair	Retailers	7-Oct-06	30%
9	Albabtain	Construction & Building	4-Nov-06	30%
		Manufacturing		
10	Alabdulateef	Investment	18-Dec-06	30%
11	Sipchem	Petrochemical Industry	9-Sep	30%
12	SVCP	Construction & Building	8-May-07	30%
13	UITC	Transportation	23-Jun-07	30%
	Saudi Printing & Packaging			
14	Co.	Media & Publication	30-Jun-07	30%
15	MESC	Construction & Building	5-Nov-07	30%
16	Alkaleej	Retailers	5-Nov-07	30%
17	Dar Al-Arkan	Real Estate Developer	1-Dec-07	11.01%
18	Al-Mojil	Construction & Building	3-May-08	30%
19	Al-Othaim	Retailers	21-Jun-08	30%
20	Halwani Bros	Agricultural and Food	21-Jun-08	30%
21	Chemanol	Petrochemical Industry	11-Aug-08	50%

Source: (Capital Market Authority, Tadawul, 2009)

4.3 Methodology

To investigate the profitability of IPOs in Saudi Arabia, we use a matched pairs' methodology. This is known as the MNR methodology in privatization literature as Megginson, Nash and Randenborgh (1994) were the first researchers who used this methodology. Since then numerous studies have used the same methodology including Turhan (2004) on the Turkish cement industry and Laura and Silvia (2007) on Spanish firms' performances. The methodology has been used in the IPO literature in Jain and Kini (1994) on American IPOs and Wang (2005) on Chinese IPOs. Basically, the matched pairs' method compares the firms' performance change between two time periods, i.e. before and after the IPO, to measure and then draw conclusions about performance change. If the performance in the post-IPO period is better, it is appropriate to conclude that IPO has improved performance. In contrast, if the post-IPO happens to be worse, the IPO has a negative effect on the firms' performance. It is noted, of course, that other factors such as changing business conditions can affect the validity of this comparison

Following previous studies, the time horizon window between 2003 and 2009 was divided into three segments for each targeted firm. The first period is the pre-IPO period (this period is labelled as the -1 year). The second time frame segment is the year of the event or the year of the IPO (labelled as 0 year). The third segment is the after-IPO period, which includes the years after the event (labelled as +1 year). It is important to realize that there is no certain way in dividing the time frame, with authors using different time windows, based on the data and the research objectives. As a result, a performance "time line" is developed which reflects the profitability results. The year (-1) was compared to the year of the IPO (year 0) and then compared to the year (+1) following the IPO. Also, we will compare the average three years before the IPO to the average years after the IPO, excluding year 0, as it has a mixed ownership. The analysis was adjusted accordingly. To avoid data incompatibility between different types of firms, we focus on the 16 limited liability firms.

The change between the two periods for the return on assets (ROA), and the return on sales (ROS) for every firm was examined using the median and the mean changes for the raw differences. The last step in the analysis is to use statistical tests of significance. As with previous studies, the Wilcoxon signed rank test for the median difference and the t-test for the mean difference were used.

5. Empirical Analysis

5.1 Performance variation between the two periods (Y-1 & Y 0)

Table 4 shows the return on assets changes at firm-level pre and post-IPO. These show a decline in the post-issue performance of the Saudi private IPOs, when compared to the pre-IPO period level. The median for before and after the IPO dropped from 14.11 per cent to 12.9 per cent (dropped by 8.14 per cent). The median for the change between the two periods is -12.80%. However, this decline was statistically insignificant. It was found that eleven limited liability firms (family owned businesses) out of sixteen have exhibited performance deterioration in the ROA in the IPO year compared to the previous year. The performance fall among this subsample is found to be worse than that found in the full sample, with a decline from 15.2 per cent to 12.7 per cent, but it is insignificant at 5 percent level.

Table 4. Comparison of the ROA between Year -1 and Year 0

Company	Before	After	Change	Change as %
Saudi Telecom	0.0867	0.2041	0.1174	135.41%
Altawania Ins	20.47	58.3	37.83	184.81%
Almarai	0.1543	0.1296	-0.0247	-16.01%
Aldrees	0.1358	0.0996	-0.0362	-26.66%
SRMG	0.1297	0.1464	0.0167	12.88%
Paper	0.1499	0.1307	-0.0192	-12.81%
Red Sea	0.3678	0.161	-0.2068	-56.23%
Albahrain	0.0917	0.0889	-0.0028	-3.05%
Alhokair	0.2893	0.3246	0.0353	12.20%
Alabdulateef	0.1594	0.1635	0.0041	2.57%
Sipchem	0.0734	0.0937	0.0203	27.66%
SVCP	0.1827	0.1298	-0.0529	-28.95%
UITC	0.1297	0.1131	-0.0166	-12.80%
SPPG	0.1411	0.1601	0.019	13.47%
MESC	0.0992	0.1204	0.0212	21.37%
Alkaleej	0.157	0.1244	-0.0326	-20.76%
Dar Alarkan	0.1553	0.1092	-0.0461	-29.68%
Almejel	0.1608	0.2464	0.0856	53.23%
Halwani	0.0916	0.0761	-0.0155	-16.92%
Alothaim	0.0975	0.0761	-0.0214	-21.95%
Kemanol	0.0465	0.0189	-0.0276	-59.35%
Median Change	0.1411	0.1296	-0.0155	-12.80%
Mean Change	1.11	2.91	1.79	7.54%

The mean value of the full sample is better, with an increase of about 7.54 per cent compared to -12.5 per cent among the limited liability firms. This indicates that the improvement is due to the performance of the privatized government firms, and not an improvement across all firms. Both privatized companies, Saudi Telecommunications and the National Cooperative for Insurance achieved an increase in the ROA after privatization of approximately 135 per cent and 185 per cent respectively. Graph 1 below shows how the return on assets has changed between the year -1 and year 0 for all firms in the sample. Twelve firms' profitability had a ROA performance decline, most being private limited liability companies. This is consistent with the IPO impact on the private firms' performance found in the literature, including Jain and Kini (1994). Note that the privatized insurance company's performance is not displayed due to the scale of its' increase.

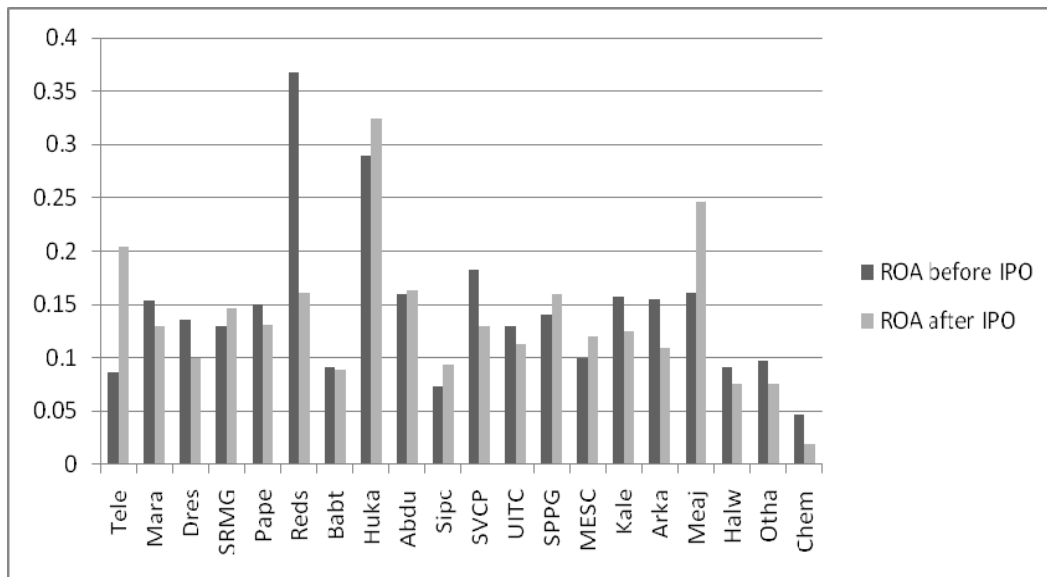


Figure 1. The Difference in ROA between Year -1 & Year 0

The return on sales, ROS, shown in Table 5 offers mixed results. While the median ROS in the year of the IPO was found to be higher by 9 per cent than the median ROS during the year before the IPO, the median of the difference between the two periods is negative, with a decline of about 3.76 per cent. This is less than the decline found in the ROA. Twelve firms in the sample exhibited a decrease in the ROS during the IPO year. However, this is insignificant at 5 per cent, similar to the ROA results. However, examining only the limited liability firms shows a sharper drop in the ROS. In addition their median in the year of the IPO is lower by 6 per cent than the median result prior to IPO year. The most

striking finding here is that the statistical test for the zero median difference between before and after the IPO in this subsample is rejected at 10 per cent. This implies a significant ROS decline during the IPO year among the limited liability firms group at the 10 per cent level. Similar to their ROA result, both privatized government companies showed strong improvement in the ROS after the IPO. Saudi Telecommunications ROS rose by 107.44 per cent during the year of the IPO, while the National Cooperative for Insurance Company showed an increase in ROS of 407.90 per cent.

Table 5. Comparison of the ROS between Year -1 and Year 0

Company	Before	After	Change	Change as %
Saudi Telecom	0.1506	0.3124	0.1618	107.44%
Altawania Ins	0.0291	0.1478	0.1187	407.90%
Almarai	0.1963	0.1798	-0.0165	-8.41%
Aldrees	0.0501	0.0528	0.0027	5.39%
SRMG	0.1707	0.2253	0.0546	31.99%
Paper	0.2068	0.1881	-0.0187	-9.04%
Red Sea	0.2323	0.2309	-0.0014	-0.60%
Albahrain	0.1211	0.1124	-0.0087	-7.18%
Alhokair	0.1746	0.1903	0.0157	8.99%
Alabdulateef	0.2316	0.2229	-0.0087	-3.76%
Sipchem	0.4476	0.3701	-0.08	0
SVCP	0.2203	0.2011	-0.0192	-8.72%
UITC	0.2287	0.1951	-0.0336	-14.69%
SPPG	0.3681	0.3713	0.0032	0.87%
MESC	0.1295	0.1361	0.0066	5.10%
Alkaleej	0.1532	0.1245	-0.0287	-18.73%
Dar Alarkan	0.4166	0.4078	-0.0088	-2.11%
Almejel	0.2325	0.2806	0.0481	20.69%
Halwani	0.075	0.0605	-0.0145	-19.33%
Alothaim	0.0329	0.0263	-0.0066	-20.06%
Kemanol	0.1181	0.0534	-0.0647	-54.78%
Median Change	0.1746	0.1903	-0.0087	-3.76%
Mean Change	0.1898	0.1947	0.0049	19.22%

Figure 2 displays the ROS variation between pre and post-IPO for the full sample. The figure has the same pattern of the ROA decline as among the erstwhile private limited liability firms. Conversely, the government companies and the joint stock companies all show improvements in their ROS figures. The National Cooperative for Insurance is not displayed due to its' substantial improvement in ROS.

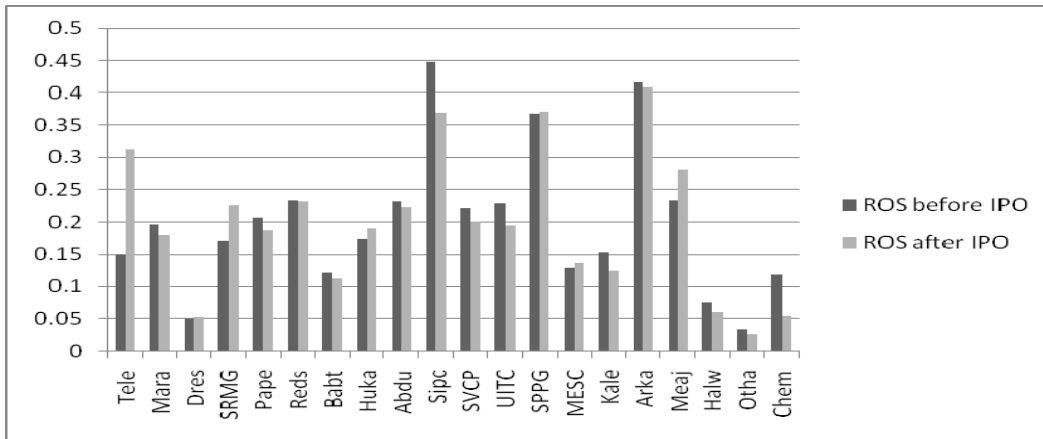


Figure 2. The Difference in ROS between Year -1 & Year 0

5.2 Performance variation between the two periods (Y-1 & Y+1)

The Saudi IPOs' profitability between year Y-1 and year Y+1, while excluding year 0, were also examined. Table 6 shows that the median for the ROA fell from 14.11 per cent before the IPO to 11.69 per cent after the IPO. This is a decline of about 11.33 per cent in the median change between the two periods. This performance decline compares to 12.80 per cent during the IPO year. However, this fall in the ROA in the full sample remains insignificant at the 5 per cent level. The different performance of the government firms and the private firms counteract each other in the full sample tests.

The mean value for the full sample is found to be 4.56 per cent higher after the IPO compared to the pre-IPO level. Again this is due to the large increase in the ROA for the two privatized government firms and the three private joint stock companies, and a reason for using the median as an alternative measurement of centrality. The three private joint stock companies, SRMG, Albabtain and Sipchem achieved increases in ROA of 29.22 per cent, 5.67 per cent and 4.22 per cent respectively.

When the limited liability firms are examined excluding the other firms, the performance decline is greater, exhibiting a 22.34 per cent fall. This is compared to the 16.5 per cent decline among this group during Y0. This result indicates that the performance deterioration has intensified in magnitude in the

first year after the IPO. Fourteen of the limited liability firms showed a performance decline. The number of firms that suffered a performance decline was eleven firms during the IPO year, but this increased to fourteen. This decline amongst this subsample is significant at 5 per cent level. Figure 3 shows the change in ROA between Y-1 and Y+1 among the Saudi IPO firms. Again it is important to note the difference between the private limited liability companies and the private joint stock companies. It seems that companies converting from limited liability to joint stock companies before going public achieve better profitability performance than private firms that go directly to an IPO.

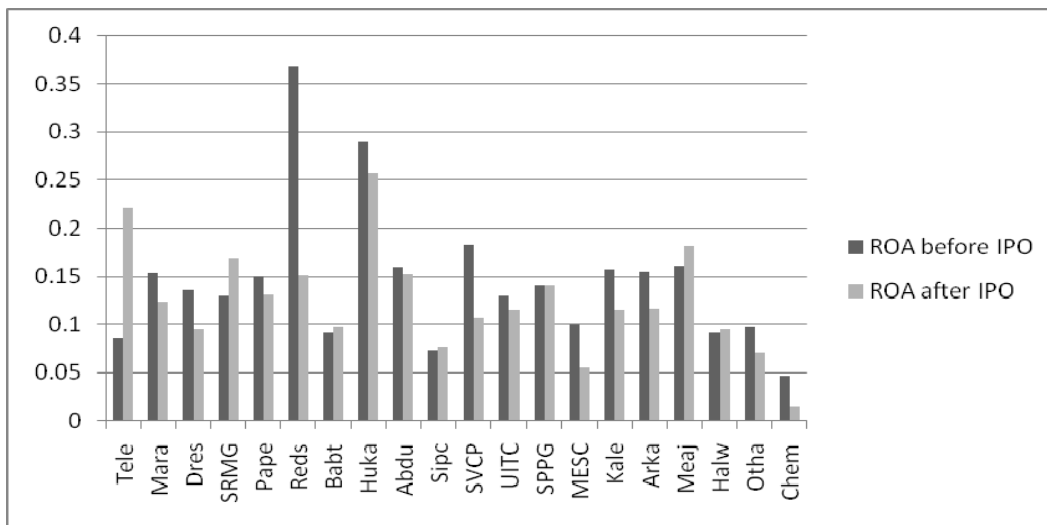


Figure 3. The Difference in ROA among limited liability firms Y-1 & Y+1

Table 6. Comparison of ROA between Year -1 & Year +1

Company	Before	After	Change	Change as %
Saudi Telecom	0.0867	0.221	0.1343	154.90%
Altawania Ins	20.47	75.25	54.78	267.61%
Almarai	0.1543	0.1235	-0.0308	-19.96%
Aldrees	0.1358	0.0947	-0.0411	-30.27%
SRMG	0.1297	0.1676	0.0379	29.22%
Paper	0.1499	0.1315	-0.0184	-12.27%
Red Sea	0.3678	0.1518	-0.216	-58.73%
Albahrain	0.0917	0.0969	0.0052	5.67%
Alhokair	0.2893	0.2569	-0.0324	-11.20%
Alabdulateef	0.1594	0.1524	-0.007	-4.39%
Sipchem	0.0734	0.0765	0.0031	4.22%
SVCP	0.1827	0.107	-0.0757	-41.43%
UITC	0.1297	0.115	-0.0147	-11.33%
SPPG	0.1411	0.1409	-0.0002	-0.14%
MESC	0.0992	0.0546	-0.0446	-44.96%
Alkaleej	0.157	0.1154	-0.0416	-26.50%
Dar Alarkan	0.1553	0.1169	-0.0384	-24.73%
Almejel	0.1608	0.1814	0.0206	12.81%
Halwani	0.0916	0.0943	0.0027	2.95%
Alothaim	0.0975	0.0712	-0.0263	-26.97%
Kemanol	0.0465	0.0145	-0.032	-68.82%
Median Change	0.1411	0.1169	-0.0184	-11.33%
Mean Change	1.112	3.701	2.588	4.56%

5.3 Saudi Family Firms' Performance (Average Years Comparison)

In this section the Saudi limited liabilities firms (the sixteen firms group) are examined, and a greater time window comparison for performance applied. The average ROA and ROS before the IPO to the average after the IPO based on both the mean and the median differences are compared. Table 7 below presents the results on these firms. The median for the ROA change is found to be -29.20 per cent, down from 14.61 before the IPO to 11.42 per cent after the IPO. The ROA mean shows underperformance, with a decline of about 23.39 per cent, falling from about 15 to 12 per cent. Using the Wilcoxon signed rank test for the median difference, and the t-test for the mean difference, the ROA deterioration is significant for both. Eleven firms have a negative ROA after the IPO with two of the firms (SVCP and Kemanol) exhibiting a more than 50 per cent ROA decline.

Table 7. Comparison of ROA Average before & after the IPO

Company	Before	After	Change	Change as %
Almarai	0.184	0.1132	-0.0708	-38.48%
Aldrees	0.1121	0.0871	-0.025	-22.30%
Paper	0.1005	0.1046	0.0041	4.08%
Red Sea	0.2668	0.1827	-0.0841	-31.52%
Alhokair	0.2348	0.2101	-0.0247	-10.52%
Alabdulateef	0.1315	0.1419	0.0104	7.91%
SVCP	0.249	0.1071	-0.1419	-56.99%
UITC	0.1614	0.1151	-0.0463	-28.69%
SPPG	0.1383	0.1409	0.0026	1.88%
MESC	0.0828	0.0546	-0.0282	-34.06%
Alkaleej	0.1882	0.1154	-0.0728	-38.68%
Dar Alarkan	0.1663	0.1169	-0.0494	-29.71%
Almejel	0.1538	0.1814	0.0276	17.95%
Halwani	0.0876	0.0943	0.0067	7.65%
Alothaim	0.1245	0.0712	-0.0533	-42.81%
Kemanol	0.0722	0.0145	-0.0577	-79.92%
Median	0.1461	0.1142	-0.0373	-29.20%
Mean	0.1534	0.1157	-0.0377	-23.39%

Similar to the ROA findings, eleven firms out of sixteen exhibited a fall in performance as measured by the return on sales. The median for the difference between the two periods declined by 11.75 per cent, while the mean decreased by 11.50 per cent. Both were found to be significant at the 5 per cent level. Table 8 illustrates the findings on return on sales.

Table 8. Comparison of ROS Average before & after the IPO

Company	Before	After	Change	Chang as %
Almarai	0.2088	0.1756	-0.0332	-15.90%
Aldrees	0.0505	0.0524	0.0019	3.76%
Paper	0.1519	0.1766	0.0247	16.26%
Red Sea	0.1733	0.1788	0.0055	3.17%
Alhokair	0.1591	0.147	-0.0121	-7.61%
Alabdulateef	0.2178	0.1822	-0.0356	-16.35%
SVCP	0.2459	0.1869	-0.059	-23.99%
UITC	0.2499	0.1774	-0.0725	-29.01%
SPPG	0.2928	0.3238	0.031	10.59%
MESC	0.101	0.0676	-0.0334	-33.07%
Alkaleej	0.1611	0.1191	-0.042	-26.07%
Dar Alarkan	0.4261	0.4199	-0.0062	-1.46%
Almejel	0.2034	0.1989	-0.0045	-2.21%
Halwani	0.0719	0.0806	0.0087	12.10%
Alothaim	0.0316	0.0223	-0.0093	-29.43%
Kemanol	0.1196	0.066	-0.0536	-44.82%
Median	0.1672	0.1761	-0.0107	-11.75%
Mean	0.179	0.1609	-0.0181	-11.50%

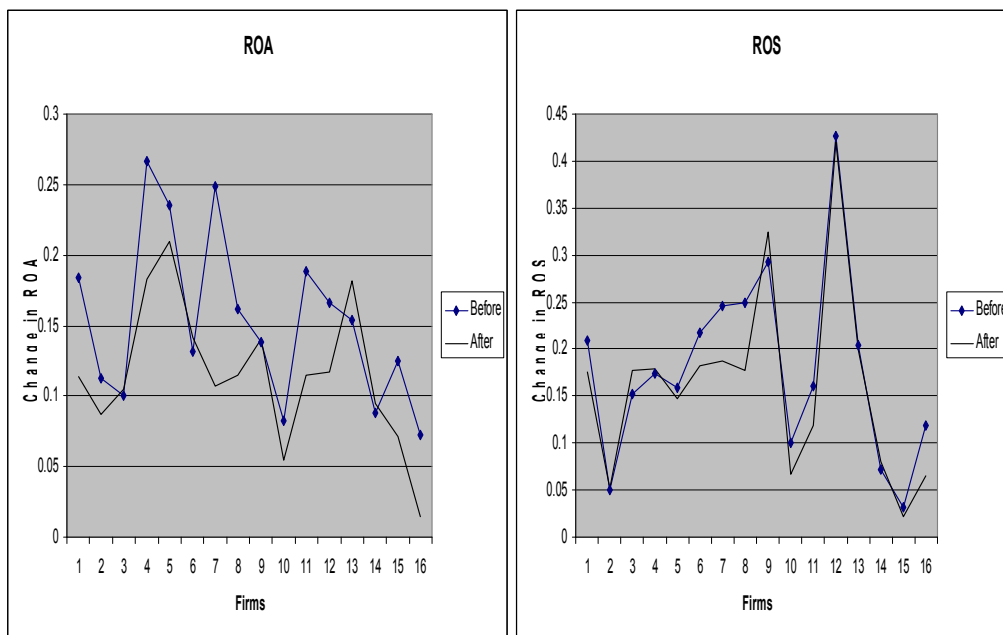


Figure 4. The average change in ROA & ROS amongst the limited liability IPOs

5.4 Performance variation between the two period's pre and post IPO summary

The summary results for the three periods Y-1 to Y0, Y-1 to Y+1 and the average three years pre-IPO to the average years post-IPO for both ROA and ROS are shown in Table 9. In Table 9, Panel A and Panel C show the results for the ROA and the ROS for the full sample 21 firms. Panel B and Panel D illustrate the results for the ROA and the ROS for the subsample of private limited liability companies. Neither the ROA nor the ROS show any significant change between the two periods among the full sample. While, sample heterogeneity affects these results, tentatively it is concluded that there is a positive impact of an IPO on the privatized government SOEs and on the private joint stock companies, as measured by the ROA and the ROS. This is consistent with findings in privatization literature such as those in Megginson, Nash and Randenborgh (1994). These entities became more competitive and efficient under market forces.

As opposed to this the sixteen limited liability firms suffered significant profitability declines. This is in line with the IPO literature such as Jain and Kini (1994), and Pagano *et al.* (1998). The performance deterioration among this group started from the year of the IPO and intensified in the magnitude in subsequent years. This is consistent with the findings of Kim *et al.* (2004). It seems that private companies after going public may suffer from a principal-agent conflict between the original owners and the new shareholders.

Table 9. Change in firms' performance of Saudi IPO firms

Panel A: ROA (21 firms)	Y-1 to Y0	Y-1 to Y+1	Y- AVG to Y+ AVG
Before	0.1411	0.1411	0.1315
After	0.1296	0.1169	0.1151
Change in Median	-12.80%	-11.33	-10.52
P-value	0.6514	0.1178	0.3135

Panel B: ROA (Ltd 16 firms)			
Before (Ltd 16 firms)	0.1521	0.1521	0.1461
After (Ltd 16 firms)	0.127	0.1162	0.1142
Change in Median	-16.5	-22.34	-29.2
P-value	0.1148	0.0021***	0.009***
Change in Mean	-12.46	-22.86	-24.57
t-stat	-1.3781	-2.8211	-3.46
P-value	0.1883	0.0129**	0.0035***

Table 9, continued.

Panel C: ROS (21 firms)			
Before	0.1746	0.1746	0.1611
After	0.1903	0.1774	0.1774
Change in Median	-3.76	-13.16	-2.32
P-value	0.4445	0.1023	0.3849
Panel D: ROS (Ltd 16 firms)			
Before (Ltd 16 firms)	0.2016	0.2016	16.72
After (Ltd 16 firms)	0.1892	0.1693	17.61
Change in Median	-6.08	-14.81	-11.75
P-value	0.0744*	0.0018***	0.0319**
Change in Mean	-7.44	-16.21	-11.5
t-stat	-1.4939	-4.9832	-2.41
P-value	0.1559	0.0002***	0.0295**

Median changes between two periods expressed as percentages. They are calculated as the median of the change between the two periods for all firms. We also report the subsample limited liabilities firms' results in separate sections in panel B for the ROA and panel D for the ROS. Wilcoxon signed rank test is used for the median change significance test, while the t-test is used for the mean change test.

* indicates significant at 10 per cent level

** indicates significant at 5 per cent level

*** indicates significant at 1 per cent level

6. Summary and Conclusions

The profitability performance for 21 Saudi firms that implemented initial public offering IPO between 2003 and 2009 was examined. Part of this period in Saudi Arabia was characterised by IPO clustering. It was found that the government privatized firms showed a substantial increase in their ROA and their ROS after the IPO as compared to the pre-IPO level. Our results are consistent with Megginson et al. (1994) on privatization's effect on firms' performance. It seems that both types of companies have become more competitive under market forces and competition. Given only two such firms in the sample, this result must be treated with extreme caution. A similar outcome was found among the big private

joint stock companies that share the same characteristics with the government firms. Again, given there are only three such firms in the sample this result must also be treated with caution. Nevertheless, this suggests a good reason for the Saudi government to continue privatisation through IPOs, and that, as a matter of policy, existing private firms undergoing IPO might be first required to spend some time as joint stock companies.

Conversely significant performance declines were found for the private limited liability firms undergoing IPOs. These results are in line with the evidence on private firms' performance decline after the IPO as reported by Jain and Kini (1994) on the American IPOs, Pagano et al. (1998) on the Italian IPOs, Kim *et al.* (2004) on the Thai IPOs, and Al-Barrak (2005) on the Saudi IPOs.

These results have implications for Saudi policy makers and investors. First, privatization activities should be encouraged and accelerated. Second, more regulations and restrictions are needed for IPO activities, especially for limited liability firms. Saudi investors should be aware of the fact that the motivation to go public was essentially to sell off the company rather than for financing expanding operations and future expansion.

Finally, this paper contributes to the literature by providing for the first time an empirical analysis on the IPO cluster that occurred in Saudi Arabia. More focus on the limited liability firms and deeper analysis for causes for the performance decline is an area for future research. This should include the whole of the Gulf Cooperation Council GCC IPOs and their stock return performance.

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