Initial Public Offerings Short and Long Term Performance of MENA Countries

Mohammad S. AlShiab
Higher Colleges of Technology, Al Ain Women's College,
Business Faculty, Al Ain, UAE

Doi: 10.19044/esj.2018.v14n10p234 URL:http://dx.doi.org/10.19044/esj.2018.v14n10p234

Abstract

This study examines a comprehensive set of 162 Middle East and North Africa (MENA) Initial Public Offerings (IPO's) for the period 2001-2015, considered the first and most comprehensive data set investigated to date. Results confirmed that IPO performances are mixed among MENA countries classified into three groups. The first group comprises countries whose IPOs over-performed the Benchmark portfolio over the short-run, but underperformed over the long-run. The second group comprises countries where IPOs underperformed the Benchmark portfolio over the following 60 months post-listing date where such underperformance became quite significant over the long-run in comparison to the short-run. The third group comprises countries whose IPOs experienced cyclical performance change from over-performance to under- performance and vice versa. Overall, the IPOs went through cycles of price corrections around the fundamental value over the long term when compared to the short term performance.

Keywords: IPOs, Investment decision, Assets allocation

Introduction

The literature is extensive, and indicates that initial public offerings (IPOs) tend to be underpriced in the short run, and then underperform the benchmark for three to five years following the offering date. For instance, Ibbotson (1975), Aggarwal and Rivoli (1990), Ritter (1991), Loughran and Ritter (1995), Levis (1993), Keloharju (1993), Rajan and Servaes (1997), Espenlaub et al. (2000), Mitchell and Stafford (2000), Jelic and Briston (2003), Lyn and Zychowicz (2003), Schultz (2003), Lee et al. (2011), and Tomasz and Joanna (2012) note that, in general, excess returns over a three-to-five-year period after an offering are negative and significant. This was the case regardless of the employed benchmark. However, these studies also found that, over a five-year period, the underperformance was less dramatic

and less sensitive to the benchmark employed. Evidence of long-run returns for IPOs is less extensive than that of short-run returns. Similarly, explanations for poor abnormal post-listing returns are relatively less developed than those for initial returns. Therefore, this study explores the short- and long-run performance of IPOs in the Middle East and North African (MENA) region, revealing new evidence on IPO activity.

This paper contributes to the IPO literature in three ways. First, examining the short- and long-term IPO returns of companies located in the MENA region is important because it will provide new and useful knowledge for professionals and academics on the performance of IPOs, thus, providing additional evidence of post-listing returns for IPO firms. To the best of the author's knowledge, no such studies have been conducted on this region. Consequently, the results of this study will enhance decision-making on investments in IPOs, as well as on the holding period for such investments. The data set used in this study includes all floated companies in the MENA region, and is the first and most comprehensive data set to be investigated to date.

Second, the long-term return performance of IPOs is important for decisions on the asset allocation of a portfolio. It is also important in searches across investment strategies that include anomalies, and have the potential to produce excess returns. Hence, the findings of this study are important for inferences on the efficiency of markets in the MENA countries. Moreover, it may improve estimates of expected risk and return and, thus, help in portfolio management and risk assessment. Third, this study employs a comprehensive cross-country data set covering emerging and developing markets, which generally lack regulation, transparency, and the adoption of international standards (including financial reporting and corporate governance standards). Therefore, by investigating the short and long run after IPO listings, this study is able to lay to rest assumptions of previous empirical studies that are constrained by the number and diversity of companies, timescales, and investment levels dictated by varying levels of development.

The two approaches are applied: BHAR and CAR. The results are consistent in all models. The first group of countries (Tunis, Morocco, Egypt, and Oman) show average abnormal returns, indicating that the IPO portfolios are underpriced relative to the benchmark portfolio over the short run, with some diversity in this group. However, in the long run, the IPOs underperformed relative to the benchmark. Furthermore, within this group, Morocco is considered an extreme case, where the results show positive cumulative excess returns for the firms for 12 months after the IPO date. However, beginning in the second year after the IPO, companies in general underwent significant price corrections that lasted approximately 18 months, producing negative cumulative abnormal returns for up to five years, post-

issue. The second group of countries represents Jordan, Qatar, and Bahrain, where the IPO portfolios were overpriced (underperformed) relative to the benchmark portfolio. However, such over-pricing is more severe and significant in the long run than it is in the short run. The last group of countries represents Kuwait, the UAE, and Saudi Arabia, where IPO portfolios experienced cyclical price corrections, from positive to negative, and vice versa, relative to the fundamental common stock value over time after an offering.

The IPO portfolios in the MENA countries covered here are all going through a process of price correction around the fundamental common stock values, irrespective of whether the portfolios have over-performed or underperformed relative to the benchmark portfolio in the short or long run. Based on this study's empirical findings, it is suggested that short-term and long-term investors should be cautious when analysing IPO firms in the MENA region, because IPO performance is country-dependent. Furthermore, the over-performance of IPOs in the short-run could encourage management to manipulate their company's market value by underpricing publicly offered stock. Such over-performance (or underpricing) will vanish over the long-run, making the overall process a zero-sum game as soon as the stock market realizes the common stock fundamental value. In conclusion, after an offering, IPO portfolios experience cyclical price corrections over time, relative to the fundamental common stock value.

The remainder of the paper is structured as follows. The second section discusses prior empirical studies on this topic. The third section describes the data and research methods employed here, and the fourth section discusses the results. The final section concludes the paper.

Literature review

IPOs of shares are frequently issued at prices substantially lower than the market price on the first day of listing. This is based on the argument that at the heart of every IPO process are informational issues between the various actors, which potentially lead to IPO underpricing and, thus, to short-term over-performance. However, empirical studies show that the long-term returns for IPOs underperform, restoring equilibrium after the short-term IPO underpricing subsequent to the listing date. These results have been found in both developed and emerging stock markets, although much higher initial returns have been found in emerging markets [Aggarwal et al. (1993); Aggarwal and Rivoli (1990); An and Chan (2008); Baron and Holmstrom (1980); Beatty and Ritter (1986); Beatty and Zajac (1994); Booth and Chua (1996); Brau and Fawcett (2006); Chan and Lo (2011); Friesen and Swift (2009); Grinblatt and Hwang (1989); Ibbotson (1975); Jelic and Briston (2003); Jenkinson and Ljungqvist (1996); Jewartowski and Lizińska (2012);

Lee et al. (2011); Levis (1993); Lin et al. (2008); Ljungqvist (1997); Ljungqvist (2007); Loughran et al. (1994); Loughran and Ritter (1995, 2000, 2002); Lyn and Zychowicz (2003); Purnanandam and Swaminathan (2004); Rajan and Servaes (1997); Ritter and Welch (2002); Wu and Kwok (2003)].

In explaining underpricing over the long-term, the research on IPOs is less conclusive on the reason behind the generally poor performance. Several theories have been developed, including signalling theory [Leland and Pyle (1977); Welch (1989); Datar and Mao (2006); Francis et al. (2010)], the information asymmetry hypothesis [Beatty and Ritter (1986); Chan and Lo (2011); Deb and Marisetty (2010); Ljungqvist et al. (2003); Rock (1986); Schenone (2004)], the institutional explanation [Hensler (1995); Hughes and Thakor (1992); Ruud (1993)], behavioural imperfection theory [Friesen and Swift (2009); Ljungqvist et al. (2003); Loughran and Ritter (2002); Purnanandam and Swaminathan (2004); Ritter and Welch (2002)], the opportunity hypothesis [Loughran and Ritter (1995); Rajan and Servaes (1997); Ritter (1991); Wu and Kwok (2003, 2007)], and the divergence of opinion hypothesis [Jelic and Briston (2003); Jewartowski and Lizińska (2012); Lyn and Zychowicz (2003)]. Therefore, while studies on US and international IPO initial returns have been consistent, the nature and underlying contributing factors of IPO long-term performance are still unclear.

Early studies focused on US firms, and reported positive initial returns and negative returns in the long run. For example, Ibbotson (1975) revealed average positive initial returns of 15.3 per cent and negative returns in the three years after going public. Similar results in the US market confirmed that, in general, IPOs tend to be underpriced in the short run, and then underperform relative to the benchmark in the following three to five years [An and Chan (2008); Chan and Lo (2011); Loughran and Ritter (1995); Philip et al. (1996); Rajan and Servaes (1997); Ritter (1991)].

According to Ritter and Welch (2002), from 1980 to 2001, the average IPO return is 18.8 per cent in the first day, and then -23.4 per cent over the next three years. Investigating Polish IPOs for the period 1991–1999, Jelic and Briston (2003) find that the mean market-adjusted initial return of the IPO sample is 27.37%. However, in the three years after an offering, there is a negative cumulative long-run adjusted mean return, ranging from -37.8 to -26.5%, for the buy-and-hold methodology. Jaskiewicz et al. (2005) find that the underperformance usually persists for up to three to five years after a listing. Examining IPO performance in the UK market, Levis (1993) reports an average initial return of 14.5 per cent, and negative long-run performance ranging from 8 per cent to 23 per cent, depending on the benchmark portfolio constructed. The same scenario applies in Ljungqvist's (1997; 2007) studies of the German and US markets, respectively. Alvarez and Gonzalez (2005)

study the Spanish market, and document similar results, confirming that the initial returns of IPOs are positive, but become negative in the long run.

Studying 221 publicly traded firms in US stock markets over the period 1993–2000, Friesen and Swift (2009) find positive cumulative excess returns for the firms for 12 months after an IPO date. However, beginning in the second year after the IPO, the average firm in their sample undergoes a significant price correction that lasts approximately 18 months, producing negative cumulative abnormal returns for up to five years, post-issue. They argue that the thrifts in their sample appear to go through a cycle of overreaction and subsequent correction after the IPO. Such results are consistent with the results of Purnanandam and Swaminathan (2004) and Daniel et al. (1998), although different methods were applied in calculating excess returns attributed to investor overreaction. In contrast to the above results, Aussenegg (2000) reports positive initial returns and market-adjusted three-year returns of 38.5% and 11.5%, respectively, for IPOs in the Polish stock exchange. Furthermore, Lyn and Zychowics (2003) documents significant first-day underpricing of 54.45%, but does not find significant evidence of underperformance in the three years after an offering. Instead, the results show values of -4.11%, 3.4%, and -24.44% after one, two, and three years, respectively.

Many other empirical studies covering emerging markets find similar results, but with much higher values because of the level of risk in such markets [Aggarwal et al. (1993); Aggarwal et al. (2008); Dawson (1987); Ghosh (2005); Lee et al. (2011); Lin et al. (2008); Omran (2005); Seshadev and Prabina (2010); Sohail and Nasr (2007)]. These studies conclude that the more risky the market in terms of information asymmetry and transparency, the more extreme positive/negative returns will be in the short and long run. For example, Seshadev and Prabina (2010) investigated the IPO performance (short-run underpricing and long-run underperformance) of 92 Indian IPOs over the period 2002–2006. On average, the Indian IPOs are underpriced by 46.55 per cent on the listing day relative to the market index. The long-run returns (up to a period of 36 months) are measured using the wealth relative (WR) and buy-and-hold abnormal rate of return (BHAR), adjusted by the market index. The results show that the underperformance is most pronounced during the initial year of trading (i.e. up to 12 months after the listing date), followed by over-performance in longer periods. The most recent study conducted by Jewartowski and Lizińska (2012), on IPOs recorded by the Warsaw Stock Exchange from 1998 to 2008, reports that the IPOs over-performed in the short term by 13.95% and underperformed by 22.62% in the three years after a listing, employing the buy-and-hold strategy.

Another stream of research on long-term IPO studies relates long-term IPO performance to other factors, such as tax-efficient compensation

[Rydqvist (1997)], global versus domestic IPOs [Wu and Kwok (2003, 2007)], prior debt offering [Cai and Lee (2005)], block sales on short-run trading days [Pukthuanthong-Le and Varaiya (2007)], underwriter reputation [Beatty and Ritter (1986); Carter et al. (1998); Chemmanur and Liu (2003); Maksimovi and Unal (1993)], government penalty regulations [Kao and Yang (2009)], public information versus negative information [Kutsuna et al. (2009)], pre-IPO earnings management [Xiong et al. (2010)], credit rating [An and Chan (2008); Chan and Lo (2011)], market feedback [Bommel and Vermaelen (2003).

The most recent studies focus on security grading by independent rating agencies [Deb and Marisetty (2010)], the existence of IPO-related competitive advantages over industry competitors [Hsu et al. (2010)], country-specific institutional characteristics in terms of legal framework quality [Engelen and Essen (2010)], financial market integration [Francis et al. (2010)], risk proxies [Sahoo and Rajib (2011)], transparency in IPO mechanisms and retail investors' participation [Neupane and Poshakwale (2012)], and institutional development and IPOs underpricing performance [Robinson and Robinson (2012)].

This study tests the implication of the asymmetry hypothesis by employing a comprehensive cross-country sample of IPOs in the MENA region, where the countries' economies range from developing to emerging. The study focuses on those IPOs of non-financial services companies to measure their performance over the short and long run. Most empirical studies reviewed on IPOs employ either the buy-and-hold abnormal return (BHARs) and/or cumulative abnormal returns (CAR). This study employs the same strategies.

The IPO literature to date is unclear on the MENA markets. The purpose of this study is to evaluate the post-issue share price performance of IPOs issued and listed on the MENA stock exchanges for the period 2001–2015. To the best of the author's knowledge, this region has not yet been examined in the literature.

Sample selection and research methodology

Sample selection

The data set includes a comprehensive sample of MENA IPOs from June 2001 to June 2015. The sample is identified by examining common equity offerings reported in *Bureau van Dijk (Zepher Database)*. The selected companies' daily share prices were collected from the *Bloomberg Database*. The following criteria were employed:

i. Firms are non-financial service companies.

ii. IPOs are common stock only, where firms have only one class of common stock outstanding.

iii. The IPO completion price (offer price) and date are clearly identified.
iv. Firms are listed on stock exchanges, and daily prices over the study period are available.

Methodology used to measure the short- and long-run IPO returns

The intention was to structure the IPO and benchmark portfolio returns using the value-weighted and equal-weighted approaches. However, because of the unavailability of the number of outstanding common shares of some IPOs, the equal-weighted approach alone is used. Therefore, the IPOs short- and long-run performance are evaluated by constructing the portfolio returns on an equal-weighted basis. The abnormal return is derived as follows:

$$ARit = Rit - Rbt, \quad (1)$$

where ARit is the abnormal return on the IPO, and t is the period of investment (in days). A positive ARit for a specific day is interpreted as a better performance for the IPO relative to the benchmark return on the same day. Here, R_{it} is the equally weighted arithmetic average of the continuously compounded return on the IPO, and R_{bt} is the equally weighted arithmetic average of the continuously compounded return on the benchmark portfolio, which contains all listed companies other than those included in the IPO portfolio. Consequently, the Rit derived from these benchmarks represents the daily abnormal return on the portfolio of IPOs. The following series of IPO abnormal returns are constructed:
Short-term: 10, 30, 90, and 120 days.
Long-term: 12, 24, 36, and 60 months.

The R_{it} and R_{bt} are the arithmetic averages of the continuously compounded returns on the specified portfolio, computed as follows:

$$R_{it} = \frac{1}{n_{\tau,t}} \sum_{i=1}^{n_{\tau,t}} r_{it} \quad (2)$$

where $n_{\tau,t}$ is the number of firms in the portfolio and r_{it} is the return of firm i, which is included in that day. A security i return on day t, computed as the natural logarithm of one plus the realized daily return, is calculated as follows:

$$r_{it} = LN\left[(r_t - r_{t-1}) / r_{t-1}\right] * 100, \quad (3)$$

where r_t is the closing price on day t, and r_{t-1} is the previous day's closing price. Furthermore, the average $\overline{ARit}$ for the entire sample in each constructed series is also calculated to find out the overall performance of the IPO

portfolios for a specific period. The $\overline{ARit}$ is computed as the arithmetic average of abnormal returns on all IPOs in the sample of size N, as follows:

$$\overline{ARit} = \frac{1}{n_{\tau,t}} \sum_{i=1}^{n_{\tau,t}} \mathrm{AR}_{it} \qquad (4)$$

A positive $\overline{ARit}$ for a specific time series is interpreted as a better performance for the IPOs compared to the benchmark return for the same period.

Three measures are used to gauge the short- and long-run returns of listed companies. The first is the IPO return in excess of the market returns (i.e. BHAR), and the second is the CAR, measured as follows:

$$BHAR_{(T1,T2)} = \left[\prod_{t=T1}^{T2}(1+R_{it})\right] - \left[\prod_{t=T1}^{T2}(1+R_{bt})\right] \qquad (5)$$

$$CAR_{(T1,T2)} = \sum_{t=T1}^{T2}(R_{it} - R_{bt}), \qquad (6)$$

where R_{it} is the daily return for firm *i* on day *t*, and R_{bt} is the daily return on the benchmark firm included in the benchmark portfolio measure, on an equally weighted basis. The holding horizon begins on the first day (T1) after the day on which an IPO is completed. If an issuing firm is delisted, the study truncates its BHAR and CAR on that date. Both methods, BHAR and CAR, have been commonly and extensively used in the literature [Fama (1998); Mitchell and Stafford (2000); Wu and Kwok (2007)].

Empirical results and discussion

A total of 365 IPOs took place over the investigated period, and were considered as the initial sample. Then, 89 were excluded from the sample because they were identified as investment trust and financial firms, and a further 114 IPOs were eliminated because of data unavailability. Thus, the final sample comprised 162 IPOs of ordinary shares by firms on the MENA stock exchanges (i.e. those in Tunis, Morocco, Egypt, Jordan, Saudi Arabia, the UAE, Bahrain, Qatar, Oman, and Kuwait).

Table (1) shows the distribution of the IPOs among the MENA countries. The table reveals there is considerable variation in the number of IPOs among the countries involved.

Table (1): The distribution of the IPOs by country (2001–2015)

	TN	MA	JO	EG	KW	QA	BH	OM	AE	SA	Total
Included IPOs	4	19	8	25	23	7	6	4	22	44	162
	2.6	11.7	4.9	15.4	14.2	4.3	3.7	2.6	13.6	27	100%
Financial Firms IPOs	8	9	19	5	6	7	3	1	16	15	89
	9	10.1	21.4	5.6	6.7	7.9	3.4	1.1	18	16.8	100%
Unavailable Data IPOs	1	6	11	61	10	7	2	5	9	2	114
	0.88	5.3	9.7	53.51	8.8	6.1	1.7	4.4	7.9	1.7	100%
Total	13	34	38	91	39	21	11	10	47	61	365
	3.5	9.3	10.4	25	10.7	5.8	3.0	2.7	12.9	16.7	100%

Table (1) shows that Saudi Arabia, the UAE, Kuwait, and Jordan generate over 50% of the IPOs in the sample, with Saudi Arabia leading in terms of the overall number of IPOs. However, after applying the sample selection criteria, Saudi Arabia, Egypt, Kuwait, and the UAE then include more than 70% of the IPOs in the sample, with Saudi Arabia leading (27% of the sample). Surprisingly, 53% of the excluded IPOs were from the Egyptian stock market, owing to the unavailability of required data. Finally, over 38% of the IPOs of financial firms that were excluded from the investigation belong to the Jordanian and Saudi Arabian stock markets.

Table (2) shows the distribution of IPOs over time. Most of the IPOs are concentrated in the period 2006–2010, peaking in 2007 (21.6% of all IPOs). On the other hand, the lowest number of IPOs is seen during the period 2001/2002 (1.24%).

Table (2): The distribution of the IPOs by year (2001–2015)

	TN	MA	JO	EG	KW	QA	BH	OM	AE	SA	Total	%
2001	0	1	0	0	0	0	0	0	0	0	1	0.62
2002	0	0	0	1	0	0	0	0	0	0	1	0.62
2003	0	0	0	2	0	0	0	0	0	0	2	1.23
2004	0	1	0	1	0	1	0	0	2	0	5	3.09
2005	0	1	0	3	1	0	1	0	4	2	12	7.41
2006	0	2	2	2	3	1	2	0	1	4	17	10.49
2007	2	5	2	3	4	2	1	2	5	9	35	21.60
2008	2	2	1	4	3	0	1	1	4	7	25	15.43
2009	0	0	0	2	4	2	0	0	3	6	17	10.49
2010	0	1	0	2	3	0	1	0	0	5	12	7.41
2011	0	1	1	1	1	0	0	0	0	4	8	4.94
2012	0	1	0	1	0	0	0	0	0	1	3	1.85
2013	0	1	1	1	2	0	0	0	2	3	10	6.17
2014	0	2	1	1	2	0	0	1	1	2	10	6.17
2015	0	1	0	1	0	1	0	0	0	1	4	2.47
Total	4	19	8	25	23	7	6	4	22	44	162	100

By applying the BHAR and CAR approaches, abnormal returns series are generated for the IPOs in the MENA countries over periods of 10, 30, 90, and 120 days, representing the short term, and 1, 2, 3, and 5 years, representing

the long term (see Table (3)). The average abnormal return for countries such as Tunis, Morocco, Egypt, and Oman show that the IPO portfolios underpriced the benchmark portfolio over the short run, with some diversity even among this group (the IPO portfolios in Tunis, Egypt, Oman, and Morocco are underpriced 10 days, 2 months, 3 months, and 12 months after the listing date, respectively). However, in the long run, the IPOs underperformed relative to the benchmark. These findings have strong support from previous empirical studies on developed and developing countries [Aggarwal et al. (1993); An and Chan (2008); Chan and Lo (2011); Friesen and Swift (2009); Ibbotson (1975); Jelic and Briston (2003); Jewartowski and Lizińska (2012); Lee et al. (2011); Levis (1993); Lin et al. (2008); Ljungqvist (2007); Loughran and Ritter (1995); Philip et al. (1996); Purnanandam and Swaminathan (2004); Rajan and Servaes (1997); Ritter (1991); Ritter and Welch (2002); Wu and Kwok (2007)]. In the case of Morocco, within the first group, the results show positive cumulative excess returns for the firms for 12 months after the IPO date. However, beginning in the second year after the IPO, companies underwent significant price corrections, in general, that lasted approximately 18 months, producing negative cumulative abnormal returns for up to five years, post-issue. The thrifts in the sample appear to go through a cycle of over-reaction and subsequent correction after an IPO. These results are largely consistent with those of Daniel et al. (1998), Purnanandam and Swaminathan (2004), and Friesen and Swift (2009).

Jewartowski and Lizińska (2012) introduce two possible explanations for positive initial abnormal returns. The first explanation for IPOs being underpriced at the initial offering is highlighted in more detail by Ljungqvist (2007). The second explanation could be that the IPOs are overvalued in the early aftermarket trading because of stock market inefficiency, as suggested by Aggarwal and Rivoli (1990). Miller (1977) discusses the divergence of opinion hypothesis in the presence of short sale restrictions, stating that the most optimistic investors determine the price in early aftermarket trading. Because these restrictions characterize IPO markets, we should expect IPOs to be overvalued in the early aftermarket. Since divergence of opinion should decline over time, this may lead to long-run underperformance.

Table (3): BHAR and CAR

Country	Abnormal Return	Short-Term					Long-Term		
		10 days	1 month	3 months	4 months	12 months	24 months	36 months	60 months
TN	BHAR	0.0161	-0.0319	-0.0631	-0.2192	-0.5818	-0.5580	-0.7297	-0.8151
	CAR	0.0164	-0.0304	-0.0542	-0.2106	-0.5183	-0.4029	-0.3772	-0.4101
MA	BHAR	0.1250	0.1109	0.1157	0.1027	0.0246	-0.3629	-0.5112	-1.1814
	CAR	0.1366	0.1221	0.1308	0.1249	0.0727	-0.7264	-0.7035	-0.7074
JO	BHAR	-0.0114	-0.0287	-0.0129	0.0436	0.1923	-0.2572	-0.2584	-0.1944
	CAR	-0.0113	-0.0280	-0.0121	0.0512	0.2319	-0.2589	-0.4368	-0.4559
EG	BHAR	0.0222	0.0083	-0.2222	-0.2404	-0.6516	-2.0855	-4.2528	-2.4090
	CAR	0.0246	0.0150	-0.1871	-0.2226	-0.3932	-1.0133	-1.3573	-1.1136
KW	BHAR	-0.0242	-0.0886	0.0984	0.1029	-0.0088	-0.2418	-0.1686	-0.106
	CAR	-0.0240	-0.0852	0.0909	0.0951	0.0213	-0.1831	-0.2577	-0.231
QA	BHAR	-0.1378	-0.1770	-0.5413	-0.5538	-0.4490	-0.9611	-1.1201	-0.8450
	CAR	-0.1341	-0.1681	-0.4449	-0.4966	-0.1888	-0.6192	-0.5853	-0.5691
BH	BHAR	-0.2180	-0.4397	-0.4908	-0.6362	-0.6633	-0.9000	-0.5969	-0.5297
	CAR	-0.2327	-0.5493	-0.6162	-1.0203	-1.1665	-0.9757	-1.1117	-1.4363
OM	BHAR	0.2210	0.1760	0.0491	-0.0435	-0.1218	0.0367	-0.2560	-0.4014
	CAR	0.2090	0.1743	0.0649	-0.0207	-0.1022	0.0747	-0.1291	-0.3009
AE	BHAR	0.0114	-0.0301	-0.3673	-0.4855	0.1073	0.2813	0.6630	-0.0313
	CAR	0.0118	-0.0270	-0.2818	-0.3474	0.0680	0.2204	0.4472	0.1057

SA	BHAR	0.0277	-0.0987	-0.0241	0.3150	0.2193	-0.0378	0.0087	-0.0472
	CAR	0.0277	-0.0927	0.0269	0.2271	0.2075	0.0636	0.1353	0.0424
GCC	BHAR	-0.1788	-0.7961	-2.8309	-3.9500	-4.3013	-7.5855	-0.8771	-0.2318
	CAR	-0.1423	-0.7159	-1.1603	-1.5627	-1.1608	-1.4193	-1.5013	-2.3587
OTHER	BHAR	0.1517	0.0637	-0.1810	-0.3083	-1.1871	-3.3031	-7.2296	-7.3957
	CAR	0.1663	0.0787	-0.1227	-0.3596	-1.0707	-2.4014	-2.8748	-2.6870
ALL	BHAR	-0.0001	-0.7992	-3.8206	-3.9944	-9.0779	-29.6501	-7.0705	-1.6983
	CAR	0.0240	-0.6372	-1.2830	-1.9223	-2.2315	-3.8207	-4.3761	-5.1336

TN: Tunis; MA: Morocco; JO: Jordan; EG: Egypt; KW: Kuwait; QA: Qatar; BH: Bahrain; OM: Oman; AE: the UAE; SA: Saudi Arabia; GCC: Gulf countries; OTH: TN, MA, JO, and EG; ALL: all MENA countries included in the study. The second group of countries includes Jordan, Qatar, and Bahrain, where the IPO portfolios overpriced (underperformed) the benchmark portfolio. However, such overpricing is more severe and significant in the long run than it is in the short run. Seshadev and Prabina (2010) document that IPOs are underpriced by 46.55 per cent up to 12 months after the listing date, but report long-run returns up to 36 months measured using WR and BHAR, adjusted using the market index. In a recent study conducted by Jewartowski and Lizińska (2012), the results show that the IPOs over-performed by 13.95% in the short term, and underperformed by 22.62% in the three years after the listing date, employing the buy-and-hold strategy.

The last group of countries includes Kuwait, the UAE, and Saudi Arabia, where IPO portfolios experience cyclical price corrections from positive to negative, and vice versa, relative to the fundamental common stock value over time, after the offering date. Zychowics (2003) documents a similar scenario, showing that IPO portfolio performance fluctuated over the first day, one year, and two years after the listing date, reporting values of 54.45%, -4.11%, and -24.44%, respectively.

In conclusion, the IPO portfolios in all the covered MENA countries are going through a process of price correction around the fundamental common stock values, regardless of whether the portfolios have over-performed or underperformed relative to the benchmark portfolios in the short or long run. Friesen and Swift (2009) argue that negative long-run returns relative to the first-day closing price indicate investor overreaction on the initial trading day. On the other hand, if investors initially under-react to information, long-term returns will be positive when measured relative to the

first closing price. Such results are consistent with those of the empirical study by Purnanandam and Swaminathan (2004).

Chan and Lo (2011) examine the impact of credit ratings on IPO long-term performance using a sample of 3941 IPOs and 130 firms with credit ratings over the period 1986–2004. Their overall findings are consistent with the asymmetry hypothesis, because reducing information asymmetry reduces risk premiums and price discounts. Hence, improving disclosure increases the speed of price discovery and improves market efficiency. Similar findings are reported in the empirical study of Deb and Marisetty (2010). The findings in this study appear to be consistent with the asymmetry hypothesis in an environment characterized by a lack of transparency and timely disclosure.

As argued in the literature, negative long-run returns can be attributed to investor overreaction only if we know that the IPO was not initially overvalued. The study conducted by Purnanandam and Swaminathan (2004) suggests that IPOs are actually overvalued at issue by as much as 50 per cent. In light of these statistics, an investor cannot attribute negative long-run returns to investors' post-IPO overreaction, because the negative returns may simply result from initial overpricing. Their results suggest that the widely documented long-term IPO underperformance may be attributable to both an initial overvaluation of the offering, followed by further post-issue price increases that eventually reverse over the long run. This evidence is interpreted as being consistent with investors' initial reactions to information, followed by subsequent overreactions and a long-term mean-reversion (i.e. long-term underperformance). Their interpretation is consistent with the empirical predictions of Daniel et al. (1998).

The results are consistent with those of previous studies showing that IPO portfolios go through cycles of corrections in the short and long term after a listing. The significance of such corrections around the fair value depends on the level of overreaction/under-reaction that the stock went through after the IPO completion date (An and Chan (2008); Beatty and Ritter (1986); Chan and Lo (2011)]. As is identified clearly in previous empirical studies on the level of efficiency in the MENA stock markets in terms of the lack of information transparency, such results confirm that the MENA stock exchanges suffer from significant information efficiency problems.

Conclusion

The literature is extensive, and indicates that IPOs tend to be underpriced in the short run, and then underperform relative to the benchmark in the long run. This study examines the short- and long-term IPO returns of companies located in the MENA region. It utilizes a comprehensive data set and provides additional evidence of post-listing returns for IPO companies in

a region that lacks regulation, transparency, and international standards (i.e. financial reporting and corporate governance standards).

On the basis of the empirical findings, it is suggested that short-term and long-term investors should exercise caution when analysing IPO firms in the MENA region, because IPO performance is country-dependent. Furthermore, over-performing IPOs in the short-run could be manipulated by companies to affect their market value by underpricing their publicly offered stocks. Such over-performance (or underpricing) will vanish in the long-run, making the process a zero-sum game as soon as the stock market realizes the common stock fundamental value. Two approaches were employed: buy-and-hold abnormal return (BHARs) and cumulative abnormal returns (CAR). These all confirmed that IPO performance is mixed among the MENA countries, which were classified into three groups. The first group comprises countries whose IPOs out-perform the benchmark portfolio in the short run, but underperform in the long run. The second group comprises countries whose IPOs underperform for 60 months after a listing date, where such underperformance becomes more significant over the long run in comparison to that in the short run. The third group comprises countries whose IPOs experience cyclical performance changes, from over-performance to underperformance, and vice versa. Overall, IPOs go through cyclical price corrections around the fundamental value. These findings are supported by the empirical results.

These findings suggest important implications by providing new knowledge for professionals and academics on the performance of IPOs in the MENA region, therefore, providing additional evidence of post-listing returns for IPO companies. Consequently, these results help enhance decisions on investments in IPOs, as well as those on the holding period of such investments, based on the most comprehensive data set investigated to date. Furthermore, the IPO performance among MENA countries over the long term is important for asset allocation and portfolio diversification.

References:

1. Aggarwal, R., R. Leal and L. Hernandez, 1993, The aftermarket performance of initial public offerings in Latin America, *Financial Management*, 22, pp. 42-53.
2. Aggarwal, S., C.L. Liu and S.G. Rhee, 2008, Investor demand for IOPs and aftermarket performance: Evidence from the Hong Kong stock market, *Journal of International Financial Markets, Institutions & Money*, 18, pp. 176-190.
3. Aggarwal, R., P. Rivoli, 1990, Fads in the initial public offering market?, *Financial Management*, 19, pp. 45-57.

4. Alvarez, S. and V. Gonzalez, 2005, Long-run performance of initial public offering in the Spanish capital market, *Journal of Business Finance & Accounting*, 32, pp. 325-350.
5. An, H. and K.C. Chan, 2008. Credit ratings and IPO pricings, *Journal of Applied Corporate Finance*, 14, pp. 584-595.
6. Aussenegg, W., 2000, Privatization versus private sector initial public offerings in Poland, *Multinational Finance Journal*, 4, pp. 69–99.
7. Baron, D.P. and B.P. Holmstrom, 1980, The investment banking contract for new issues under asymmetric information: Delegation and the incentive problem, *Journal of Financial and Quantitative Analysis*, 4, 851.
8. Beatty, R.R. and J.R. Ritter, 1986, Investment banking, reputation, and the underpricing of initial public offerings, *Journal of Financial Economics*, 15, pp. 213-232.
9. Beatty, R.P. and E.J. Zajac, 1994, Managerial incentives, monitoring, and risk bearing: a study of executive compensation, ownership, and board structure in initial public offerings, *Administrative Science Quarterly*, 39, pp. 315-335.
10. Booth, J.R. and L. Chua, 1996, Ownership dispersion, costly information, and IPO underpricing, *Journal of Financial Economics*, 41, pp. 291-310.
11. Brau, J.C. and S.E. Fawcett, 2006, Initial public offerings: An analysis of theory and practice, *The Journal of Finance*, 61, pp. 399-436.
12. Cai, N. and H.W. Lee, 2005, The long-run post-offer performance of subsequent IPOs. Working paper, The University of Michigan-Dearborn.
13. Carter, R.B., F.H. Dark and A.K. Singh, 1998, Underwriter reputation, initial returns, and the long run performance of initial public offering stocks, *The Journal of Finance*, 53, pp. 285-311.
14. Chan, K. and Y. Lo, 2011, Credit ratings and long-term IPO performance, *Journal of Economics and Finance*, 35, pp. 473-483.
15. Chemmanur, T.J. and H. Liu, 2003, How should a firm go public? A dynamic model of the choice between fixed-price offerings and auctions in IPOs and privatizations, Working paper, Boston College.
16. Daniel, K., D. Hirshleifer, and A. Subrahmanyam, 1998, Investor psychology and security market under- and overreactions, *The Journal of Finance*, 53, pp. 1839-1885.
17. Datar, V. and D.Z. Mao, 2006, Deep underpricing of China's IPOs: Sources and implications, *International Journal of Financial Services Management*, 1, pp. 345-362.

18. Dawson, S., 1987, Secondary stock market performance of initial public offers, Hong Kong, Singapore and Malaysia: 1978-1984, *Journal of Business Finance & Accounting*, 14, pp. 65-76.
19. Deb, S.S. and V.B. Marisetty, 2010, Information content of IPO grading, *Journal of Banking & Finance*, 34, pp. 2294-2305.
20. Espenlaub, S., A. Gregory, I. Tonks, 2000, Re-assessing the long-term underperformance of UK initial public offerings, *European Financial Management*, 6, pp. 319-342.
21. Fama, E.F., 1998, Market efficiency, long-term returns, and behavioural finance, *Journal of Financial Economics*, 49, pp. 283-306.
22. Francis, B., I. Hasan, J. Lothian and X. Sun, 2010, The signalling hypothesis revisited: evidence from foreign IPOs, *Journal of Financial and Quantitative Analysis*, 45, pp. 81-106.
23. Friesen, G. and C. Swift, 2009, Overreaction in the thrift IPO aftermarket, *Journal of Banking & Finance*, 33, pp. 1285-1298.
24. Ghosh, S., 2005, Underpricing of initial public offerings: The Indian experience, *Emerging Markets Finance and Trade*, 14, pp. 45-57.
25. Grinblatt, R. and C. Hwang, 1989, Signalling and the pricing of new issues, *The Journal of Finance*, 45, pp. 393-420.
26. Hensler, D.A., 1995, Litigation cost and underpricing of initial public offerings, *Managerial and Decision Economics*, 16, pp. 111-128.
27. Hughes, P. and A.A. Thakor, 1992, Litigation risk, intermediation, and the underpricing of initial public offerings, *The Review of Financial Studies*, 54, pp. 709-742.
28. Ibbotson, R.G., 1975, Price performance of common stock new issues, *Journal of Financial Economics*, 2, pp. 235-272.
29. Jaskiewicz, P., V.M. Gonzalez, S. Menendez and D. Schierech, 2005, Long-run IPO performance analysis of German and Spanish family-owned businesses, *Family Business Review*, 18, pp. 179-2002.
30. Jelic, R. and R. Briston, 2003, Privatization initial public offerings: The Polish experience, *European Financial Management*, 9, pp. 457-484.
31. Jenkinson, T.J. and A. Ljungqvist, 1996, Going Public: Theory and Evidence on how Companies Raise Equity Finance, Oxford University Press, Oxford.
32. Jewartowski, T. and J. Lizińska, 2012, Short- and long-term performance of Polish IPOs. *Emerging Markets Finance and Trade*, 48, 59-75.
33. Keloharju, M., 1993, The winner's curse, legal liability, and the long-run price performance of initial public offerings in Finland, *Journal of Financial Economics*, 34, 251-277.

34. Kutsuna, K., J. Smith and R. Smith, R., 2009, Public information, IPO price formation, and long-run returns: Japanese evidence, *The Journal of Finance*, LXIV, 505-545.
35. Lee, J.S., C.T. Kuo and P.H. Yen, 2011, Market states and initial returns: Evidence from Taiwanese IPOs, *Emerging Markets Finance and Trade*, 47, 6-20.
36. Leland, H.E. and D.H. Pyle, 1977, Information asymmetries, financial structure, and financial intermediaries, *The Journal of Finance*, 32, 317-387.
37. Levis, M., 1993, the long-run performance of initial public offerings: The UK experience 1980-1988, *Financial Management*, 22, 28-41.
38. Lin, C.Y., H.T. Lee and C.L. Lee, 2008, one more step, some more performance? An empirical study on initial public offerings in the Taiwan emerging stock market, *Emerging Markets Finance and Trade*, 44, 6-18.
39. Ljungqvist, A.P., 1997, pricing initial public offerings: Further evidence from Germany, *European Economic Review*, 41, 1309-1320.
40. Ljungqvist, A.P., 2007, IPO Underpricing: A Survey, Handbook of Corporate Finance: Empirical Corporate Finance, North-Holland, 378-422.
41. Ljungqvist, A.P., T.J. Jenkinson, W.J. Wilhelm, 2003, Global integration in primary equity markets: The role of U.S. banks and U.S. investors, *The Review of Financial Studies*, 16, 63-99.
42. Loughran, T., R.R. Jay and R. Kristian, 1994, Initial public offerings: International insights, *Pacific-Basin Finance Journal*, 2, 165-199.
43. Loughran, T. and J.R. Ritter, 1995, the new issues puzzle, *The Journal of Finance*, 50, 23-51.
44. Loughran, T. and J.R. Ritter, 2002, Why do not issuers get upset about leaving money on the table in IPOs? *The Review of Financial Studies*, 15, 413-444.
45. Lyn, E.O. and E.L. Zychowicz, 2003, the performance of new equity offerings in Hungary and Poland, *Global Finance Journal*, 14, 181-195.
46. Maksimovi, V. and H. Unal, 1993, Issue size choice and underpricing in thrift mutual-to-stock conversions, *The Journal of Finance*, 48, 1659-1692.
47. Mitchell, M.L. and E. Stafford, 2000, Managerial decisions and long-term stock price performance, *The Journal of Business*, 73, 287-329.
48. Neupane, S. and S. Poshakwale, 2012, Transparency in IPO mechanism: Retail investors' participation, IPO pricing and returns, *Journal of Banking & Finance* 36, 2064-2076.

49. Omran, M., 2005, Underpricing and long-run performance of share issue privatization in the Egyptian stock market, *The Journal of Financial Services Research*, 28, 215-234.
50. Philip, J.L., L.T. Stephen and S.W. Terry, 1996, Australian IPO pricing in the short and long run, *Journal of Banking & Finance*, 20, 1189-1210.
51. Pukthuanthong-Le, K. and N. Varaiya, 2007, IPO pricing, block sales, and long-term performance, *Financial Review*, 42, 319-348.
52. Purnanandam, A. and B. Swaminathan, 2004, Are IPOs really underpriced? *The Review of Financial Studies*, 17, 811-848.
53. Rajan, R. and H. Servaes, 1997, Analyst following of initial public offerings, *The Journal of Finance*, 52, 507-529.
54. Ritter, J.R., 1991, the long-run performance of initial public offerings, *The Journal of Finance*, 46, 3-27.
55. Ritter, J.R. and I. Welch, 2002, A review of IPO activity, pricing, and allocations, *The Journal of Finance*, 57, 1795-1828.
56. Robinson, M. and R. Robinson, 2012, Dutch-auction IPOs: institutional development and underpricing performance, *Journal of Economics and Finance*, 36, 521-554.
57. Rock, K., 1986, Why new issues are underpriced, *Journal of Financial Economics*, 15, 187-212.
58. Ruud, J.R., 1993, Underwriter price support and the IPO underpricing puzzle, *Journal of Financial Economics*, 34, 135-152.
59. Schenone, C., 2004, the effect of banking relationships on the firm's IPO underpricing, *The Journal of Finance*, 59, 2903-2958.
60. Schultz, P., 2003, Pseudo market timing and the long-run underperformance of IPOs, *The Journal of Finance*, 58, 483-518.
61. Seshadev, S. and R. Prabina, 2010, After market pricing performance of initial public offerings (IPOs): Indian IPO market 2002-2006. VIKALPA 35, 27-43.
62. Sohail, M. and M. Nasr, 2007, Performance of initial public offerings in Pakistan, *International Review of Business Research Papers*, 3, 420-441.
63. Tomasz, J. and L. Joanna 2012, Short- and long-term performance of Polish IPOs, *Emerging Markets Finance and Trade*, 48, 59-75.
64. Welch, I., 1989, Seasoned offerings, imitation costs, and the underpricing of initial public offering, *The Journal of Finance*, 44, 421-449.
65. Wu, C. and C. Kwok, 2003, the pricing of global and domestic initial public offerings by US companies, *Journal of Banking & Finance*, 27, 1167-1184.