



## IPOs PERFORMANCE ANALYSIS: EVIDENCE FROM EMERGING MARKETS IN THE BALKANS

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### Abstract

*The main purpose of this paper is to investigate the performance of initial public offerings (IPOs) in the emerging markets with particular focus on the markets of Balkan countries. The paper provides analysis of long and short performance of IPOs. In the Balkan emerging markets IPOs are relatively rarely used. Although all observed Balkan countries have gone through processes of transition from planned economies to market economies in the past 25 years, just a few state-owned companies have been privatized by use of IPOs. Due to this specific nature of the companies the analyzed sample of IPOs is comprised of state-owned and non-state-owned companies. The results are interpreted and expounded accordingly, taking into consideration the aforementioned conjunction. The findings indicate that company characteristics, signalling variables and financial variables have influence on the IPOs short and long term performance. The paper provides academia and policymakers with new revelations concerning the IPO processes in Balkan emerging economies' capital markets.*

**Keywords:** Capital Markets, IPO, Emerging Economies, Signalling

**JEL classification:** G01, G12, G14

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### 1. INTRODUCTION

Initial public offerings (IPOs) can be observed as a process consisting of two essential parts. The first one can be observed as the initial public offering of a company's common shares, while the second one can be observed as the listing of a company's share on a stock exchange.

During the past four decades a large literature has investigated IPOs worldwide. There are many studies of initial public offerings (IPOs) of the developed markets. The majority of conducted analyses and published documentation concerning IPO has revolved around returns on investors as the main issue. The observation standpoint for IPO analysis in these four decades has moved back and forth from performance of IPOs (underpricing/overpricing), time perspectives (long and short), owner structure of company to the behavioral overview on the IPO performance itself.

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In this paper we investigate IPOs in the emerging markets of the Balkans. In this context, the phrase “emerging markets of the Balkans” implies the markets of the following countries: Slovenia, Croatia, Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Serbia, Montenegro and Kosovo.

Some of the above-mentioned countries – such as Slovenia and Croatia – have managed to escape the main identification as *being* Balkan due to their rapid development and integration in the European Union. They have nonetheless been included in this study due to the fact that they share common history, values and financial infrastructure with their less developed counterparts, such as Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, Serbia, Montenegro, and Kosovo – all of them stemming from the same, now-defunct country, Yugoslavia.

Even though more than a quarter of a century has passed since the disintegration of Yugoslavia, it is the authors’ belief that these countries should be analyzed together as a cluster in the light of this IPO performance study given that all of them have simultaneously, or within a short period of one another, gone through a transition process from centrally planned to open market economies.

Having performed this IPO analysis, we can safely conclude that the IPO process had been marginally used in the process of privatizing state-owned companies of the examined countries. From 1995 to 2015, only a handful of IPOs have been executed, even though all of the observed countries still own and operate a significant number of state-owned enterprises. Thus, the main reason for the lack of IPO’s may be at least partially attributed to a lack of political will as well as a lack of knowledge about the intricacies of a fully functioning stock market. Although the underpricing of the IPOs in developed markets is a well-known fact in financial literature, the behavior of the small emerging markets of the Balkans remains relatively unknown. This study attempts to see whether the behavior the Balkan markets regarding the pricing of IPOs is in line with the theoretical and empirical analysis of the developed and emerging countries.

The purpose of this paper is to examine the newly-launched stock’s performance in the short and long term in the Balkan markets and detect any differences in trend performance as suggested by theory and observed in practice in stock markets elsewhere. This is a first-of-its-kind study focusing solely on the Balkan stock markets. Its main contribution lies in shedding the light on the post-IPO financial performance in the little-known Balkan stock exchanges by providing conclusions that can be used as a springboard for further analyses of IPO performance done by both academics and practitioners. Its main weakness stems from the lack of availability of data for some of the observed countries, meaning that this study can be expanded in both scope and size once that data becomes accessible.

The remainder of this paper is arranged as follows: [Section 2](#) gives an overview of the current literature on initial public offerings. [Section 3](#) provides a summary of the IPO processes in the Balkans, whereas the [subsections 3.1](#) covers the data and research methodology used in this paper, along with [subsection 3.2](#) which goes into further detail and provides empirical findings of IPOs returns in Balkan emerging countries. Finally, [Section 4](#) concludes by imparting some policy implications and recommendations for further analysis.

## 2. LITERATURE REVIEW

Both theoretical and empirical literature on IPOs performance is copious. It should be emphasized that research on IPOs is rapidly becoming one of the most explored topics in

empirical finance. The focus of the first papers on IPOs performance has been mainly on empirical evidence of the initial returns of new issues (Reilly and Hatfield, 1969; Logue, 1973; R. G. Ibbotson, 1975; Pagano *et al.*, 1998; Saunders, 1990). Many authors have proved that a great number of new issues in general have underpriced IPOs (Booth and Chua, 1996; Brau *et al.*, 2012; Li, 2011; Loughran and Ritter, 1995, 2004; Ritter, 1998, 2003; Zheng and Li, 2008).

The IPO performance was examined both in the short and the long term. Incidentally, the overarching characteristic of the literature about the short term IPO performance are the findings of its underpricing. The empirical investigation on the topic were conducted by different authors and for diverse markets (Bouis, 2009; Chi and Padgett, 2005; Choi and Nam, 1998; Ritter and Welch, 2002), having repeatedly shown the underpricing phenomena present during IPOs.

R. Ibbotson *et al.* (1988) as well as Ritter (1991) had demonstrated in their study that IPOs have tendency to underperform in long term. The results were confirmed in other studies and markets as well (Chambers and Dimson, 2009; Loughran *et al.*, 1994; Ritter and Welch, 2002; Su and Bangassa, 2011).

Different approaches were utilized in some of the studies as authors attempted to explain IPOs performance in developed markets. For instance, Li (2011) used behavioral theories as a tool for long-term underperformance explanation.

In recent years, a new strand of literature has developed on initial public offerings of common stock (IPOs) in emerging markets. Recently there have been a lot of empirical studies of IPOs in the emerging markets (Achua, 2011; Aminul *et al.*, 2010; Aussenegg, 2000; Bateni and Asghari, 2014; Bateni *et al.*, 2014; Bundoo, 2007; Gu, 2003; Mumtaz and Maqsood, 2014; Peter, 2007; Wei Leong and Devi, 2015; Yi-Shuan and Shin-Herng, 2010). The main characteristic of all studies is the underperformance of IPOs both in a short- and long-term period. The findings of those studies related to emerging countries were in line with the performance of IPOs in the developed countries.

The existing literature on IPOs of Balkan markets is both insufficient and inadequate. The few samples of obscure research performed on the subject (Galetić *et al.*, 2008; Hruška *et al.*, 2008; Berk and Peterle, 2015) each treat the issue of IPO performance from a partial perspective. For example, it should be emphasized that Berk and Peterle (2015) only analyzed the Slovenian market within other Central and Eastern European countries. Other papers are related to the developed IPOs in Croatian market. The reason for inadequate theoretical and empirical literature on IPOs in the Balkan markets may also be located in the lack of data as a consequence of IPO deficiency in the observed markets.

### 3. BALKAN EMERGING COUNTRIES AND IPOs

As mentioned before, from the times of their transition to open markets economies until today – that is, from the 1995-2015 period – initial public offerings were rarely used in the Balkan emerging markets. During this observed time period, only thirteen successful IPOs were performed. The Croatian market is leading the pack in term of IPOs. In this market there were eight successful IPOs performed. The following market is Slovenia with three successful IPOs. The Former Yugoslav Republic of Macedonia and the Bosnian market, specifically in Banja Luka stock exchange, had had just one successful IPO each. It should be emphasized that the IPO performed in Macedonia was issued on the Regular

market segment, meaning that the requirements towards reporting were more relaxed as opposed to the stricter Official market segment.

Initial public offerings were never used in the market of either Kosovo or Serbia. The nonexistence of IPOs on the market of Kosovo may be explained due to the political and economic situation and the fact that it is a fairly young country, having declared independence from Serbia in 2008. The main problem for the lack of initial public offerings in Serbia may be found in poor legislation frames in times of high liquidity. The current situation in Serbia is slightly different however, as it demonstrates the lack of political ambition for the economic development of the market. This fact is present in all observed Balkan merging markets.

The absence of a high number of IPOs in all of the emerging markets on the Balkan Peninsula points to an existing weakness present in these markets. The privatization of state-owned companies through initial public offering is a key factor in releasing the potential of the market. Some of the main reasons for the inadequate use of initial public offering in the observed markets include the process and modus of privatization selected in each country. The reasons, the method of execution, as well as the consequences of privatization in observed markets were analyzed in a great number of studies (Bicanic, 1993; Donais, 2002; Franičević 1999; Gould, 2003; Hadzic, 2002; Mencinger, 2007; Smith *et al.*, 1997; Tzifakis and Tsardanidis, 2006; Vujacic and Petrovic Vujacic, 2011). The main conclusions of the studies could be covered under a couple common denominators: doubtful, vague, sloppy, hasty, and underpriced. Hence, the lack of IPOs processes in the emerging Balkan countries should be, and are, observed in that light.

### 3.1 Data and research methodology

The majority of the initial public offering performed in the Balkan emerging markets appeared as an outcome of the excess liquidity in the global markets. Prior to the Global Financial Crisis, an increased money supply predominantly from the US market, spilled over globally, also reaching the Balkans. The influence of the global liquidity spill-over effect has had a great impact on Balkan markets, one of the results being the trend of initial public offerings. Some Balkan emerging markets took their chances, while others like Serbia, Bosnia and Herzegovina as well as Montenegro did not seize the opportunity. The majority of the IPOs that were executed rode that positive wave of liquidity in the Balkan markets (see Table no. 1).

It should be stated that the Global Financial Crisis had spilled over the Balkan emerging countries with a lag opposite to the developed markets. The late spill-over effect is evident from the IPOs performed in 2008 in the markets of Slovenia and Bosnia and Herzegovina.

**Table no. 1 – Initial public offering in the Balkan emerging counties**

Country	Overall no. of IPO	Year	No. of IPOs
Croatia	8	2006	1
		2007	6
		2013	1
Slovenia	3	2007	1
		2008	2
Macedonia	1	2007	1
Bosnia and Herzegovina	1	2008	1

Standard methodology was utilized for this research. As in Ritter and Welch (2002), Kenourgios *et al.* (2007), Yi-Shuan and Shin-Herng (2010), Peter (2007), Husnan *et al.* (2014) widely practiced formulas for the empirical analysis of IPOs performance were used in this paper. The estimation of the initial premium to the investors i.e. the raw returns on stocks is calculated using the conventional methodology:

$$RR_s = \frac{Sp_t - IPOp_0}{IPOp_0} \cdot 100 \quad (1)$$

In formula (1) RRs stands for raw returns of stock and it represents the quotient of difference of the price shares in time t (Spt ) and the initial offer price of the stock IPOp0 and initial offer price of the stock IPOp0. Based on each initial offer price IPOp0, the initial returns i.e. raw returns for the first, second, third, fourth, fifth and twenty-first day of trading for the short term, and for the long term for first, second and third year were calculated. The estimation of initial premium to the investors i.e. the raw returns presumes that there is no time lag between the initial offer and the subsequent trading of the observed stock.

After estimation of raw returns on stocks, the raw returns of the Market Index ( $RR_{MI}$ ) on the observed markets were also estimated. Following the same principle and the formulae for the raw returns on stocks, the same methodology was utilized for the raw returns on the Market Index, as follows:

$$RR_{MI} = \frac{MI_t - MI_0}{MI_0} \cdot 100 \quad (2)$$

As Kenourgios *et al.* (2007), Hensler *et al.* (2000) data were adjusted for a possible change in market conditions causing an impact on the changes in the price. The estimation of excess of returns is calculated using the formula (3) which is calculated by subtracting the Market Index of the raw returns on stocks and the raw returns.

$$ER_t = \frac{Sp_t - IPOp_0}{IPOp_0} - \frac{MI_t - MI_0}{MI_0} \quad (3)$$

In order to test the short term pricing of the excess of returns, calculations were performed for the first, second, third, fourth, fifth and twenty-first day of trade. For the long term period, calculations were performed for the first, second and third year of trade.

### 3.2 Empirical results of IPOs pricing

From the analysis of IPOs performed in the Balkan emerging countries it may be conclude that a phenomenon of underpricing is found for short term. The results for the short term values in Table no. 1 support findings in studies taken by Ritter (1998), Hensler *et al.* (2000) and Chi and Padgett (2005). The conclusions are in line with generally accepted and proven fact of theoretical and empirical explanations of underpricing of IPOs for the short term. The results of IPOs taken in Balkan emerging countries indicate that, on average, those investors purchase shares in initial public offering processes earn significantly higher returns at the end of the first trading day and at the end of the twenty-first day of trading. Results of

average raw returns as the excess returns on short term presented in [Table no. 2](#) and [Table no. 3](#) implies that the underpricing phenomenon is present in the Balkans as well.

The second part of [Table no. 2](#) provides the results for the short term (1, 2, 3, 4, 5 and 21 day) average raw return. First-day average raw return is 36.77% while the last-day of the short term period, that is the twenty-first day, shows an average raw return of 26.6%. It is important to emphasize the declining trend between the first and the twenty-first day of trading. Values of the standard deviation are increasing as the time gap between offered prices and observed day widens.

**Table no. 1 – Raw returns on shares of IPOs in Balkan emerging markets**

Time	Average %	Standard deviation	Number of observations	Minimum return %	Maximum return %
3y	-54.41	32.71	13	-99.93	2.92
2y	-51.68	31.07	13	-99.84	-0.25
1y	-32.32	39.63	13	-99.55	44.97
21d	26.06	44.88	13	-22.64	155.02
5d	27.91	21.39	13	-7.59	145.21
4d	26.80	21.61	13	-13.33	143.58
3d	26.73	21.18	13	-13.33	143.58
2d	30.60	21.72	13	-21.83	194.26
1d	36.77	23.65	13	-25.00	259.65

The values of average excess returns are in line with and trailing the results of raw returns. It should be stated that the values of excess returns are minor compared to raw returns, as expected by theory.

**Table no. 2 – Excess returns on shares of IPOs in Balkan emerging markets**

Time	Average %	Standard deviation	Number of observations	Minimum return %	Maximum return %
3y	-2.05	30.39	13	-38.07	66.12
2y	-10.02	35.92	13	-86.42	56.27
1y	-10.63	36.02	13	-85.72	41.33
21d	20.31	22.66	13	-10.48	60.10
5d	18.83	19.68	13	-6.45	45.98
4d	17.94	20.00	13	-11.43	49.94
3d	17.94	19.58	13	-10.61	48.61
2d	18.07	19.72	13	-17.05	40.03
1d	19.12	21.56	13	-18.62	56.20

The results for long term IPOs, for both average raw and average excess returns as evidenced in the above tables, indicating over-performance over the initial price. The average raw returns fell for -32.32% during the first year, plummeting further at -51.68% for the second year and leveling off the drop in the third year at -54.4%. Evidently, a clear declining trend can be observed. In contrast, the average excess returns on shares are relatively lower, falling only to -10.63% for the first year, slightly narrowing the gap to -10.02% for the second year and indicating a clear upward trend for the third year, finishing at 2.05%.

From data analysis from [Tables no. 2 and 3](#) data for long time period (1, 2 3 years) it can be stated that in context of minimum and maximum percentage return excess returns corrects the results of raw returns on appropriate value and indicate the lower average deviations.

It should be noted that the obtained results are different from all the previous studies undertaken. However, the results should be observed in light of the launching time of IPOs and the overall economic landscape present at the time, as business cycles can significantly affect the IPO's performance. These findings indicate that initial public offerings in the Balkan emerging markets should be investigated more thoroughly, examining not only their returns but the overall impact on the economy. The IPOs long term results indicate that observed markets are small, ineffective and should strive to consolidation. Also, possible explanation for divergent long term results may be found in the fact that Balkan emerging markets are still not fully recovered from the impact of the Global Financial Crisis. It may even be maintained that they have been under great duress due to a lack of capital in the markets.

#### 4. CONCLUSION

The most applicable finding of this paper is that short-term profits can be made during an IPO issuance in the Balkans, if the analysis is performed thoroughly and the timing is correct. That is, contrary to all the findings in empirical literature, underpricing is not an issue in the short term during the IPO process in the Balkans. Financial practitioners may find this discovery encouraging, given that clear trends are observable as local underwriters have adopted the best practices from their parent companies and are openly rewarding their most courageous clients who have jumped the bandwagon first.

The second finding pertaining to this study is that while geographically and demographically large, the Balkan market is severely fragmented, which may be one of the main reasons for its inability to achieve higher rates of development. The existence of several stock exchanges, each catering to one small market, presents an opportunity for the entire region to look into consolidation of its financial infrastructure so as to enhance its visibility outside the Balkans and reap numerous gains in efficiency.

The policy implications that emanate from this study must be viewed in context of the common history shared among the investigated Balkan economies. The state-owned companies that were privatized through IPO's were built with resources collectively pooled from all of the former Yugoslav republics, while the spoils from privatization accumulated in the state budgets of the countries that inherited the companies due to their location. Thus overpricing may be present due to investors' perceptions that they could gain proportionally much more than what the state had initially invested, as company valuations incorporated the information of the origin of resources in their fundamentals. This fact raises further questions which requires additional research outside the scope of this paper.

Therefore, it is the authors' belief that no Balkan market should be viewed in isolation of its counterparts, given that each country's market, if viewed in separation, can add marginally very little to the study of the region's financial flows. The biggest limitation of this paper stems from the number of IPOs performed so far, which at 13 total, is not sufficient enough to warrant conclusive findings. Despite these shortcomings, further analysis should be conducted in the context of business cycles, origin of resources and comparative studies relative to other regional stock markets.

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