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Impact of Macroeconomics Factors and Political Regimes on Fluctuation in Number of IPOs in Pakistan

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Abstract *The aim of the study is to determine the factors that fluctuate the numbers of IPOs (NIPOs) issued in Pakistan from 1992 to 2017. Firstly, the study examined the impact of macroeconomic factors such as GDP, Consumer Price Index (CPI), market return, Industrial production index, market volatility, and political stability on the NIPOs. Secondly, the study determined the impact of political regimes (i.e. democratic regime and military regime) on the NIPOs. The censored Tobit regression model is used to determine the relationship between dependent and independent variables. The study found that economic growth positively influences the NIPOs over time in Pakistan; however, market returns, inflation negatively affected the NIPOs. The study further found the number of IPOs shows an overwhelming increase in the military regime, contrary to the democratic regime.*

Key Words: IPOs Cycle, Capital Demand Hypothesis, Political Regimes, Pakistan

JEL Classification:

Introduction

Initial Public Offering (IPO) broadly means going to the public. It involves business firms, companies and organizations. IPOs are deemed as a turning point in the life of a firm. Several economic experts have come up with their own definitions of the process. Lee & Edmonston (2011) argue that IPO is a type of public offering where the company, private firms or non-government entities offer their shares and goods to the general public for sale for the first time. Through this process, a public or a limited company go public and offer shares to private investors. The companies opt for IPOs to expand their capital, monetize the investment of private investors and become a publicly-traded enterprise.

Many researchers discussed that companies and business firms have a life cycle—one important juncture in the life of the companies in the decision to go public or not. The decision to go public through an initial public offering is basically aimed at gaining some external investment. The decision to go public and get its name listed on the stock

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exchange requires a number of reasons. The prime reasons for the purpose include underpricing, bringing diversity, having access to extra capital and the ability to attract more and more investments Albanez & De Lima (2014). But, during the process of going public and becoming a stock exchange-listed company, it would have to follow some strict rules and regulations. The process of going public is carried out in a cycle in accordance with the hot and cold market. When the market hot, a high number of returns are received, and the IPO volume remains high and adverse results are seen when the market is cold (Sherman & Titman, 2005). Thus it can be rightly summed up that the process of IPO runs in a cycle. The underpricing is referred to as the listing of an IPO below its actual market value. The market value of the product is normally high, but through IPO, a lower price is offered in order to introduce a product more effectively to the market and get a positive response from the public. The process is called underpricing. The level of underpricing observes substantial fluctuations. (Chambers & Dimson, 2009) a research article gave the example of underpricing in the UK as innovative and comprehensive evidence of significant changes.

Similarly, (Alti 2005) suggested that clustering of Initial Public Offerings (IPOs) is a well-documented phenomenon. Recent research on clustering dynamics uncovers puzzling patterns in firms' IPO timing decisions. Likewise, (M. B. Lowry & Schwert, 2005) find that the average price update of current IPOs, which is a measure of the extent to which realized offer prices deviate from initial expectations, strongly predicts IPO volume in the near future. Unexpectedly high offer prices are followed by more firms completing their IPOs, more new filings, and fewer firms withdrawing their IPOs (Pagano et al., 1998). Furthermore, most IPO firms do not have pressing needs for external funds to finance investment; instead, the issue proceeds often add to firms' cash balances (Albanez & De Lima, 2014). In short, firms prefer to go public after observing unexpectedly high offer prices and do not seem to channel the issue proceeds toward investment most of the time. At first look, this evidence seems to suggest a behavioral explanation for clustering of IPOs—one based on entrepreneurs attempting to time the market to benefit from temporary investor sentiment (Liu, 2015).

The main objectives of the study are to explain the factors influencing IPO volume as well as to investigate IPO fluctuation through different macroeconomic variables as the macroeconomic changes have an impact on the cash flow of various companies and affect their prices simultaneously (Burton et al. 2006). The factors under study are basically two in number. Firstly, macroeconomic factors deal with the economic position of a country (Abrahamson et al., 2011). The second factor of the research study is the political regime. This study observes the fluctuation of IPOs during military regimes and the democratically elected political government.

It is extensively discussed in the literature that there are three persistent anomalies are associated with IPOs issuance. Taking place in the cycle, the IPOs are seen in view of the hot and cold market. When the market is hot, the IPOs volume will remain high, while in the cold market, the number of IPOs would show a downward trend. However, in the cold issue market, IPO's are overpriced, which is considered a direct loss to the investors. Hence, it is a puzzling phenomenon that why the number of IPO's fluctuate over time. Previous literature suggested that a number of IPO's fluctuate over time due to macroeconomic condition (Ameer, 2012; Tran & Jeon, 2011). However, very little attention has been given to determine the fluctuation in IPO's by examining the institutional settings and political environment. Therefore, this study tends to examine

the IPO's fluctuation over time by undertaken institutional settings and political environment along with macroeconomic factors.

It has been observed from the extensive literature review that the phenomena of IPOs fluctuation are largely discussed in developed countries as compared to developing (Chambers & Dimson, 2009). The nature of developed countries with respect to economic, political and institutional settings are different than developing countries. Therefore, to fill this gap, this study seeks to undertake the phenomena of IPO's fluctuation over time in a developing country, particularly Pakistan. Because Pakistan's capital market will provide better results as the country has a unique economic environment, institutional setting and political environment. Hence, in term of the economic environment, Pakistan's economy has faced several ups and downs due to frequent changes in government structure, policies and economic reforms that directly affect the number of IPOs (Kiymaz, 2000; Sohail & Nasr, 2007). Moreover, after the establishment of SECP, the corporate governance of listed companies has been considerably improved in Pakistan (Bansal & Khanna, 2012). Furthermore, after the implementation of these rules and regulations in 1999, all the offering firm were bound to issue IPO under the new guidelines for public offerings. This has resulted in a more vigorous and efficient IPOs issuance since companies can raise their funds and float shares to the public. Therefore, this study aims to examine the fluctuation of IPO's volume over time in Pakistan.

Based on the above discussion, this study will firstly highlight the impact of macroeconomic factors on the number of IPO's. Secondly, this study will highlight the pre and post effect of the Security and Exchange Commission of Pakistan (Institutional setting) and IPO volume. Thirdly, this study will highlight the impact of the different political regime (Democratic, Military Government) on IPOs' volume.

Literature Review

Ipo's Cycles or Clustering

Going-public activities have varied greatly overtime during the past three decades. Variations in IPO activities have been observed to move together with changing economic conditions over time. Previous research is done, and literature produced on the subject matter is not sufficient. However, the work done by other researchers and authors needs to be examined. The areas on which they focused attention and the findings they reached to are required to be analyzed. The methodology applied by (M. Lowry 2003) to his article – which appeared in the journal --- was also used by other researchers.

(Alti, 2005) argue regarding the IPO clustering, which has already been discussed in detail by a number of researchers and financial managers. The article explains the clustering of IPO in the light of time and industry. This article discusses various dynamics of IPOs. Higher prices, expectations of the company owners as well as common investors, need for external financing are discussed in the article. The researcher believes that companies go public owing to unexpectedly higher prices, due to which the market for their goods reduces.

M. Lowry et al. (2010) is focused on the rising and fall of IPO volume over a certain period. The author focuses on the offers made by the companies to the public and the expectations that the public keeps from the companies in case of making investments.

The research carried out by Lowery is an empirical one using the theories of Capital Demand and Investor Sentiments. The author observes the things happening with regards to the companies going public and the situations they face. The researchers a comparison between the increase in the number of IPO and the market returns (M. Lowry, 2003).

Another expert in business and finance (Bajo et al., 2016) argued in a research article and focused the study on the status and functioning of the companies listed on Nairobi, Kenya Stock Exchange. During his study, the researcher has found that information about the performance, market returns and public investment in companies listed on Nairobi Stock Exchange was not enough. Therefore, the researcher has evaluated the effects of IPOs and market returns. Some more studies have been carried out on the subject in Kenya. The researcher has taken account of those researches (Kanja, 2014).

Ameer (2012) produced some valuable research on the subject. The research has focused study on GDP, market return, industrial production and interest rate. The research was done on the Malaysian market. The researcher applied Tobit Model to evaluate his data. Rashid believes the GDP growth leave a positive impact on the number of IPOs. Similarly, the industrial production index has positive relations with IPO volume. Moreover, interest rate leaves a negative impact on the number of IPOs.

Some studies were undertaken by a number of researchers elaborate IPOs from macroeconomic perspectives. The main findings of these studies are that macroeconomic variables like GDP growth rate, industrial production rate and others leave a strong positive impact on IPOs volume in emerging markets (Louzis et al., 2012; M. Lowry et al., 2010; Tran & Jeon, 2011). There is a dynamic interaction between Consumer Price Index (CPI) as discussed in the neoclassical economic theory.

Moreover, other researchers like (Loughran & Ritter, 2002) observed in the separate researches they have carried out that the CPI impact on IPO volume. These researchers believe that the CPI affect the IPO volume adversely. The Consumer Price Index (CPI) leaves an imprint on the IPO volume and fund collected from equity (Loughran & Ritter, 2002; M. Lowry, 2003).

The literature reviewed above showed the perspectives of different markets across the world. However, no proper study could be done on Pakistan Stock Exchange. Therefore, this study analyses the situation of the Pakistan Stock Exchange in view of the researches done already.

Reasons Of IPO'S Fluctuation

Capital Demand Theory

Ibbotson et al. (1984) presented Capital demand theory and argued that a modification in a firm's economic setting would gift it with new investment opportunities that then cause a rise within the firm's demand for capital. The essential intuition behind the capital demand hypothesis is that once corporations expect a higher economic process, they have an inclination to hunt for additional finance so as to fund capital investments. In general, commercialism volume will increase once mixture capital demand increases. Hence, the capital demand theory predicts that the number of IPO is absolutely associated with a mixture of capital demand.

Investor Sentiment Theory

LEE et al. (1991) in Investor sentiment theory posits some periods a category of investors might become without reasoning optimistic and willing to pay for stocks or a minimum of for a set of stocks. The capitalist sentiment hypothesis asserts that corporations time associate degree commercialism so as to require advantage of too optimistic investors. Throughout these times, the market includes a tendency to overestimate the corporate, decreasing the relative value of equity. Pangano, Panetta and Zingales (1998) realize that Italian corporations exploited overvaluation by temporal order the general public giving or supplying to coincide with a surge in gain. The market tended to interpret the temporary increase in gain as an associate degree indicator of the firm's long-run gain.

Information Asymmetry Theory

Balakrishnan & Koza (1993) indicated in Information asymmetry theory that the market acknowledges that managers of a firm have superior data of his firm relative to the market. The knowledge spatial property hypothesis predicts that the firm can solely locomote with a public giving once this price of taking exceeds the direct issue prices and any adverse-selection prices. Thus, as spatial data property within the market will increase, corporations can have less incentive to perform associate degree commercialism.

Research Methodology

Population, Sample and Sampling Techniques

The population of the study consists of all firms that make IPO's on Pakistan Stock Exchange during the period from 1992 to 2017. In this research, the sample contains listed companies that are offering IPO's. The sample period is selected from 1992-2017 because the first IPO's in Pakistan is conducted in 1992. This study used census sampling techniques.

Data and Sources of Data Collection

This research will use secondary data and will be obtained from the prospectus of the companies, SBP and SECP websites.

Table 1.

1	Number of IPO's	SECP & PXE websites
2	GDP, Consumer Price Index (CPI), market return, Industrial production index, market volatility	World Bank database & State Bank of Pakistan website
3	Political index rate	WGI

Regression Models

For investigating the relationship between IPO volume and macroeconomic factor Tobit Regression Model has been applied. The data consist of 228 month in which 97 months has no IPOs, that is why the data becomes a censored data. According to Gujarati (2012), Tobit model is also referred to as censored regression model. This model can rightly be

used in a situation when the dependent variable are zero while at the same time the independent variable is not zero so the data need to be censored.

Equation 3.3 shows the impact of macroeconomic factor on number of IPO's. This equation provides the estimation based on the number of IPO's

$$NIPO = \beta_0 + \beta_1 GDP_t + \beta_2\ I_t + \beta_3 IPI_t + \beta_4 MR_t + \beta_5 MV_t + \beta_6 PSI_t + \epsilon \quad (3.3)$$

Whereas$NIPO$ shows the number of IPO's which is the dependent variable,$\beta 0$ is the intercept of the equation,GDP_t is the gross domestic product of , I_t is the Consumer Price Index (CPI), IPI_t sows the industrial production index, MR_t shows the market return, MV_t refers to market volatility, PSI_t shows the political stability index and ϵ is error term used in the economic model.

The political regimes impact of the number of IPO's, this study will used dummy variables for Democratic and Military regime. For, Democratic term D_{d92-98} and D_{d08-17} will be used. However, for Military period D_{m99-07} will be used.

Equation 3.6 and 3.8 provide the impact of IPO's fluctuation in the democratic term and equation 3.7 shows the impact of IPO's fluctuation in the military period while equation 3.9 show the combination of all these equations.

$$NIPO_t = \beta_0 + \beta_1 GDP_t + \beta_2 I_t + \beta_3\ IPI + \beta_4 MR_t + \beta_5 MV_t + \beta_6\ PSI_t + \beta_6 D_{d92-98} + \epsilon \quad (3.6)$$

$$NIPO_t = \beta_0 + \beta_1 GDP_t + \beta_2 I_t + \beta_3\ IPI + \beta_4 MR_t + \beta_5 MV_t + \beta_6\ PSI_t + \beta_6 D_{m99-07} + \epsilon \quad (3.7)$$

$$NIPO_t = \beta_0 + \beta_1 GDP_t + \beta_2 I_t + \beta_3\ IPI + \beta_4 MR_t + \beta_5 MV_t + \beta_6\ PSI_t + \beta_6 D_{d08-17} + \epsilon \quad (3.8)$$

$$NIPO_t = \beta_0 + \beta_1 GDP_t + \beta_2 I_t + \beta_3\ IPI + \beta_4 MR_t + \beta_5 MV_t + \beta_6\ PSI_t + \beta_6 D_{d92-98} + \beta_6 D_{m99-07} + \beta_6 D_{d08-17} + \epsilon \quad (3.9)$$

Whereas shows$NIPO_t$ the number of IPO,$\beta 0$ is the intercept of the equation,GDP_t is the gross domestic product of, I_t is the Consumer Price Index (CPI), IPI_t sows the industrial production index, MR_t shows the market return,MV_t refers to market volatility, PSI_t shows the political stability index, D_{d92-98}shows dummy variable for democratic period of 1992 to 1998, D_{m99-08}shows the dummy variable for the military period of 1999 to 2007, D_{d09-17} shows the dummy variable for the democratic period of 2009 to 2017and ϵ is error term used in economic model.

Analysis and Results

The analysis of the impact of political stability on IPO fluctuation in Pakistan has also been included in this chapter. The political regime in this chapter has been categorized as a military rule and political governments. It has been observed that the military regime from 1999 to 2008 remain stable and consistent, which left a positive impact on IPO fluctuation, and more companies were seen offering IPOs to the public. While the duration of political government remained shorter and not so consistent, due to which enough data could not be acquired to reach significant analysis. However, it was found that a total of 131 IPOs were issued during the whole period under the study, of which 85 were issued during the military regime and 46 during the political rule.

Descriptive Analysis

Table 2 is descriptive statistics data firms listed on the Pakistan stock exchange. The mean value of IPO is 0.575 with a standard deviation of 0.807. This shows that industry has a substantial effect on the issuance of IPO. The average mean of GDP is 4.29

between the times of 1999 to 2017. The average CPI for the year was 88.3 with highest value of 160 and standard deviation 41.3. Industrial production index mean is 96.2 with standard deviation of 29 and maximum value of 174. Market return (MR) average 0.0747 with standard deviation of 0.163. Market volatility mean is 0.0127 and political stability index mean is 4.45.

Descriptive Analysis

**IPO Initial Public Offering dependent variable, the independent variables are GDP Gross Domestic Product, CPI Consumer Price Index, IPI Industrial Production Index, MR Market Return, MV Market Volatility & PSI Political Stability Index*

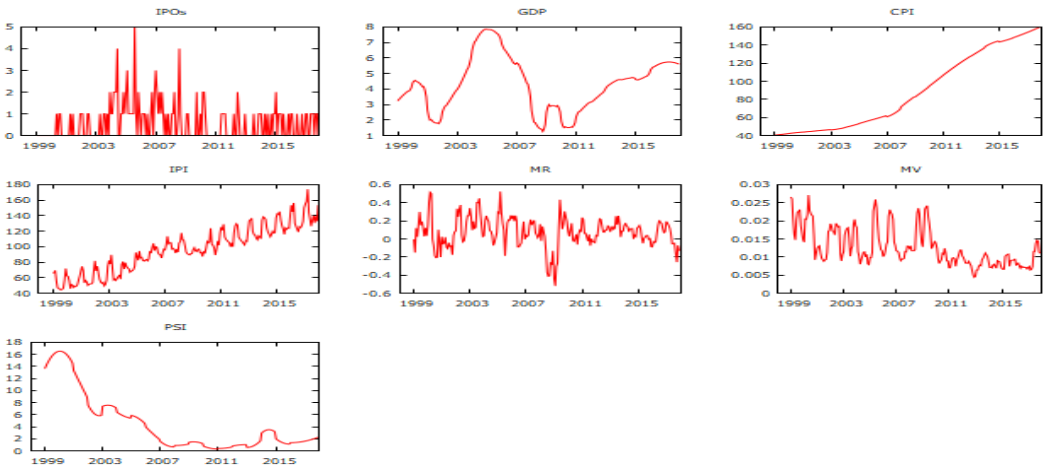
Table 2.

Variable	Mean	Median	SD.	Min	Max
IPOs	0.575	0.000	0.807	0.000	5.00
GDP	4.29	4.39	1.73	1.26	7.86
CPI	88.3	77.4	41.3	40.5	160.
IPI	96.2	96.8	29.0	44.4	174.
MR	0.0747	0.0824	0.163	-0.520	0.523
MV	0.0127	0.0112	0.00523	0.00440	0.0271
PSI	4.45	1.92	4.78	0.313	16.5

Time Series Graph

The following time series graph shows GDP's strong positive relation with IPO fluctuation. The graph shows seasonality behavior in market return sometime, while strong cyclic behavior during other times. This is the reason that no apparent trend in the data is observed over this period. IPI graph shows an increasing trend with seasonality and has no cyclic behavior here. Similarly, the MV and PSI show a downward trend, which shows there is no seasonality, but the downward trend shows actually the part of a long cycle that is cyclic behavior.

Time Series Graph



Correlation

The regression model is always exposed to Collinearity issues. The prime issue seen in most of the research is that of multicollinearity, which occurs due to strong correlations among variable contrary to the facts new information is not added to regression models. If the variable is greatly correlated with one another, the regression coefficients will become inexplicit. The author recommends less than 70 per cent correlations within variables. If the correlation crosses the mark of 70 percent, it will result in the occurrence of a multicollinearity problem. This study uses a correlation matrix and VIF analysis to evaluate the collinearity among variables.

Table 3 shows that there is a positive correlation between Consumer Price Index (CPI) and Industrial Production Index (IPI), which is 0.8956. While on the other hand, there is a negative correlation between CPI and Political Stability Index (PSI), which is -0.6565 also a negative correlation between CPI and Market Volatility (MV) which is -0.5937. Moreover, the table shows the negative correlation between Industrial Production Index (IPI) and PSI which is -0.7622. Also, IPI shows a negative correlation to MV, which is -0.5937.

Table 3. Correlation

IPOs	GDP	CPI	IPI	MR	MV	PSI	Variable
1.0000	0.3229	-0.1011	0.0370	-0.0360	0.0057	-0.1254	IPOs
	1.0000	0.0143	0.1074	0.2718	-0.0496	0.0244	GDP
		1.0000	0.8956	-0.1107	-0.5937	-0.6565	CPI
			1.0000	-0.0672	-0.5911	-0.7622	IPI
				1.0000	-0.1743	0.0865	MR
					1.0000	0.4905	MV
					0.0057	1.0000	PSI

**IPO Initial Public Offering dependent variable, the independent variables are GDP Gross Domestic Product, CPI Consumer Price Index, IPI Industrial Production Index, MR Market Return, MV Market Volatility & PSI Political Stability Index*

VIF/Correlation

Table 4. VIF Interpretation

Value of VIF	Results
VIF=1	Not correlated
$1 \leq VIF \leq 5$	Moderately correlated
$VIF \geq 5$	Highly correlated

Table 5 the GDP value is 1.605, which shows a moderate correlation of GDP. All other variables are moderately correlated except CPI and IPI which value is higher than 5, means that they are highly correlated.

Table 5. VIF Results

Variable	VIF
L GDP	1.605
L CPI	5.301

Variable	VIF
L IPI	6.306
L MR	1.096
L MV	2.443
L PSI	3.610

ADF Test for Stationarity/Non-Stationarity

Augmented Dickey-Fuller (ADF) is used for stationarity/non-stationarity before the regression estimation and unit root presence in IPO fluctuation with time series data. According to this test, "the null hypothesis is that a time series variable has a unit root or is not stationary". Logarithm data transformation has been used plus tested for the presence of unit roots in the time series data levels and first differences of data.

This table reports the results of the Augmented Dickey-Fuller test in the impact of macroeconomic factors on the number of IPOs of the time series variables: IPO, number of IPOs per month; GDP, growth rate; CPI, Consumer price index; Ind-PI, industrial production index, MR, market return, MV, market volatility and PSI, political stability index.

Table 6. Results of Augmented Dickey-Fuller (ADF) test

Variables	Log Levels	Log Difference (1st level)
l_GDP	-1.991	-4.00971***
l_CPI	-2.09121	
l_IPI	-1.62366	-5.12459***
l_MR	-4.36888**	-10.2711***
l_MV	-3.82511*	-11.1505
l_PSI	-0.877642	-4.72328**

*This table presents the results based on Augmented Dickey-Fuller (ADF) for stationarity. *significant at 10% level. **significant at 5% level. ***significant at 1% level.*

The result in the table shows that at 1, 5 and 10 % value null hypothesis cannot be rejected. On the other side, for other variables which have the unit root null hypothesis at first, the difference is rejected at a significance level of 1%.

Tobit Regression: Overall Model Result

Table 6 shows a significant positive relationship between GDP and IPO volume level of significance is 0.035, which is less than 5%. Hence H1 hypothesis is supported. Hypothesis H2 is also supported by table 3 at a level of significance of 0.0001, which states that there is a negative relation between CPI and the number of IPOs. IPI have a significant effect on the number of IPOs, so as a result, H3 of the research is supported by table 3 result that was 0.0003. Market return (MR) also has a significant effect on the number of IPOs, as the result above shows that MR has a significant effect of 0.046 on the number of IPOs. While no significant relation was found between Market volatility and Political stability on the number of IPOs, due to limited data observations. Therefore, the study did not support H5 and H6. Results of this analysis are also supported by prior empirical literature (Rashid. A 2012).

Table 7. Macroeconomic factors and IPO Fluctuation based on Tobit Regression Model (1999-2017)

	Coefficient	Z
Const	−9.57337	−2.961***
l_GDP	0.995412	2.138**
l_CPI	−2.84492	−4.642***
l_IPI	3.84842	3.653***
l_MR	−0.297483	−1.981**
l_MV	−0.501679	−1.034
l_PSI	0.00709871	0.03362

*This table shows the macroeconomic effect on IPOs' fluctuation through the tobit regression model. *significant at 10% level. **significant at 5% level. ***significant at 1% level.*

IPO Fluctuation during Political Regime

Military Regime (1999-2008)

The tables are given here show the accurate data of the IPO fluctuation during the military period. The factors leading to the positive impact on IPOs have been given in the tables. The significance of the data shown in the table showed that factors leading to the positive impact proved true. The P-value of GDP, which is 0.0302, proves the fact that the higher GDP growth rate affects IPOs positively. Similarly, the P-value of CPI, which stands at 0.0953, also support the hypothesis. Moreover, the P-value of market volatility and market returns are 0.0279 and 0.0266, respectively, also support the idea.

Table 8. Military period and IPO fluctuation based on Tobit Regression model (1999-2008)

	Coefficient	Z
Const	−27.0537	−1.872*
l_GDP	1.13595	2.167**
l_CPI	7.23812	1.668*
l_IPI	−2.37974	−1.175
l_MV	−1.16082	−2.199**
l_PSI	0.465204	0.9109
l_MR	−0.351039	−2.217**

*This table shows the Political regime (Military period) on IPOs' fluctuation through tobit regression model. *significant at 10% level. **significant at 5% level. ***significant at 1% level.*

Democratic regime (2009-2017)

The following table pertains to the data acquired about the political regime. Since the data is insufficient due to the limited time of the political rule. As the data is insignificant due to which the desired results could not be achieved. Therefore, this part of the objective has been counted as a limitation of the study.

Table 9. Democratic period and IPO fluctuation based on Tobit Regression model (2009-2017)

	Coefficient	Z
l_GDP	−1.53185	−2.814***
	Coefficient	**Z**
l_IPI	−0.776285	−0.4078
l_MV	−1.29499	−1.306
l_PSI	0.308920	0.9411
MR	5.53777	3.519***
l_CPI	−0.409972	−0.1751

*This table shows the Political regime (Military period) on IPOs' fluctuation through the Tobit regression model. *significant at 10% level. **significant at 5% level. ***significant at 1% level.*

Discussion

Having discussed the objectives and methodology of the study in the initial chapters, an overall summary of the research done is given here. The very objectives of the study were to evaluate the impact of macroeconomic factors on IPO fluctuation. Another objective of the study was to discuss the impact of political regime – democratic and dictatorial - on IPO fluctuations in Pakistan. The research questions that were pursued during the study were based on the objectives given above. Before kicking off formal research to get to the findings, a proper search was made to find out the objectives and draw questions from them accordingly. For this purpose, a thorough literature review was done. The theories pertaining to the subject matter, such as Capital Demand Theory, Investor Sentiment Theory and Information Asymmetry Theory, were consulted. Once the objectives were finalized and questions framed, formal research was done by collective data for the study from various sources. The data was statistically analyzed. Also, different tests were undertaken to check and analyze the data and draw relevant findings to reach a conclusion. Apart from statistical and descriptive analyses, some models were also applied to the study in order to check the significance. Tobit regression is the leading model applied to the study. The prime reason for applying this model is to verify these objectives. The Tobit model was specifically used in this study so that censored data could be analyzed through it (Chipeta, 2016).

Going to the public for the business companies is a good practice, which improves business and related activities. Therefore more and more companies opt for IPOs, which would certainly leave a positive impact on business activities. The total number of IPOs issued during the period 1999 to 2017 was 131. The lowest IPO figure which was issued is 0 during the year 1999 whereas the high figure was 19 during 2004. The fluctuation occurred due to the following reasons, which are the key findings of the study.

GDP growth rate is the backbone of the national economy of any country. The better the GDP is, the stronger the economy of any country would be. The study analyzes that when the GDP is at the lowest figure, i.e. 1.26, only 10 IPO are issued by a different firm. But on the other hand, when the GDP is at a high value, that is 7.86, more IPO is issued during that period -- 2003-2004. This shows that the stronger economy of a country increases the level of competition among the business firms. They would try to have more and more reach out to the people and consumers. And for this purpose they would focus more attention on going to public. In order to promote IPOs, those at the

helm of affairs should focus attention on improving the GDP and thus promoting their economy. This study carries great similarities with the researches of (Ameer, 2012; M. Lowry, 2003; M. Lowry et al., 2010).

Consumer price index in Pakistan has shown upward trend leaving negative impact on IPOs. To investigate the results it clearly shows that when CPI was 48.93, 17 IPO were issued by firm during 2003, while when CPI was high i.e. 159.93, only 7 IPO were issued by different firm in 2017, indicating negative relation. The greater CPI always adversely affects IPOs as companies are unable to get more loans and accept more investments to expand their businesses. Therefore, the rulers should focus attention on keeping the interest rate at the lowest possible level, which would not only leave a positive impact on IPO but also help boost national economy. This process and result equivalent to the research study of (M. Lowry, 2003; M. Lowry et al., 2010; M. B. Lowry & Schwert, 2005; Pagano et al., 1998) .

In order to get a welcoming response from consumers and investors, the companies need to give greater returns to them. The result of the study shows that when the MR figure low, that is -0.520, only 4 IPOs were issued during 2009. Similarly, when the value of MR is at a high level, such as 0.523, a total of 19 IPOs were issued, which was almost five times greater than the low MR value. The returns given to the investors would motivate them to make more and more investments. Also, the number of investors would also run high with the passage of time. The analyses of the study were also applied in the Rashid Ameer study during 2012 at Malaysian emerging market economy(Ameer, 2012) and more other researchers like (Jin et al., 2016; Tran & Jeon, 2011)

Political as well as economic stability is a prerequisite for the smooth functioning and prosperity of any country. Therefore, in order to have a positive trend in IPOs, political stability should be there in the country. In a country like Pakistan, the trend remains more positive in the democratic set up than in the dictatorial regimes. There should be stability in the political system of the country. Stable democracies bear stable economies. There should be the sustainability of the democratic setup. Unfortunately, the democracy in Pakistan is derailed quite frequently. This is the reason we have been unable to have a stable economy. During the so-called democracy under a military ruler – General Musharraf - in 2003 and 2004, the economic condition was good in the country. Thus more IPOs numbering 35 were issued during that period. The results of the study are similar to the research studies of (Ghufran et al., 2016; Hearn, 2013).

Conclusion

This study deals with the fluctuation of IPOs in Pakistan. No such study could be undertaken on the subject matter so far. During the study, it was found that the IPOs witnessed tremendous fluctuation during the period under study. A total of 131 IPOs were issued during the period under study. The number of companies going public saw ups and downs during different rules due to a host of reasons. During the military rule from 1999 to 2008 trend of IPO remained high as 85 IPOs were issued by a number of companies during this period. This trend positively affected the overall economy of the country and improved the companies, which made it public. Also, the service delivery of the companies, which went public, also got improved to a major extent. Besides the sustainability of the military rule, the improved GDP also gave a boost to IPOs. The major number of IPO observed during the period under study was in 2004-05, wherein the GDP of the country had reached the highest mark of --.

It was also found during the period under study that the number of IPOs remained low during the political governments. The total number of IPOs during the political government was 46. The reasons for having the low number were simple as there was no such stability during the political government as it was during the military rule.

Therefore, we can conclude that political and economic stability are the essentials for the promotion of IPOs. The IPOs saw an upward trend when the country was politically stable, having better GDP growth.

References

Abrahamson, M., Jenkinson, T., & Jones, H. (2011). Why Don't US Issuers Demand European Fees for IPOs? *Journal of Finance*, *66*(6), 2055–2082. https://doi.org/10.1111/j.1540-6261.2011.01699.x

Albanez, T., & De Lima, G. A. S. F. (2014). Effects of market timing on the capital structure of Brazilian firms. *International Finance Review*. https://doi.org/10.1108/S1569-376720140000015013

Alti, A. (2005). Clustering Patterns in Initial Public Offerings. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.305156

Ameer, R. (2012). Macroeconomic factors and initial public offerings (IPOs) in Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, *8*(1), 41–67.

Bajo, E., Chemmanur, T. J., Simonyan, K., & Tehranian, H. (2016). Underwriter networks, investor attention, and initial public offerings. *Journal of Financial Economics*. https://doi.org/10.1016/j.jfineco.2015.12.001

Balakrishnan, S., & Koza, M. P. (1993). Information asymmetry, adverse selection and joint-ventures. Theory and evidence. *Journal of Economic Behavior and Organization*. https://doi.org/10.1016/0167-2681(93)90083-2

Bansal, R., & Khanna, A. (2012). Determinants of IPOs Initial Return: Extreme Analysis of Indian Market. *Journal of Financial Risk Management*. https://doi.org/10.4236/jfrm.2012.14012

Batnini, F., & Ph, D. (2015). *IPO Waves : How Market Performances*. *31*(5), 1679–1692.

Brau, J. C. (2012). Why Do Firms Go Public? In *The Oxford Handbook of Entrepreneurial Finance*. https://doi.org/10.1093/oxfordhb/9780195391244.013.0016

Chambers, D., & Dimson, E. (2009). IPO underpricing over the very long run. *Journal of Finance*. https://doi.org/10.1111/j.1540-6261.2009.01468.x

Chipeta, C. (2016). Post IPO dynamics of capital structure on the Johannesburg Stock Exchange. *South African Journal of Business Management*. https://doi.org/10.4102/sajbm.v47i2.57

Daoud, J. I. (2018). Multicollinearity and Regression Analysis. *Journal of Physics: Conference Series*. https://doi.org/10.1088/1742-6596/949/1/012009

Edwards, A. K., & Hanley, K. W. (2010). Short selling in initial public offerings. *Journal of Financial Economics*. https://doi.org/10.1016/j.jfineco.2010.03.010

Ghufran, B., Awan, H. M., Khakwani, A. K., & Qureshi, M. A. (2016). What Causes Stock Market Volatility in Pakistan? Evidence from the Field. *Economics Research International*. https://doi.org/10.1155/2016/3698297

Hearn, B. (2013). The institutional determinants of IPO firm prospectus length in a developing context: A research note. *Research in International Business and Finance*. https://doi.org/10.1016/j.ribaf.2012.06.001

Hodges, S. D., Tompkins, R. G., & Ziemba, W. T. (2005). The Favorite/Long-shot Bias in S&P 500 and FTSE 100 Index Futures Options: The Return to Bets and the Cost of Insurance. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.424421

Homan, R. (2001). The principle of assumed consent: The ethics of gatekeeping. *Journal of Philosophy of Education*. https://doi.org/10.1111/1467-9752.00230

Ibbotson, R. G., Diermeier, J. J., & Siegel, L. B. (1984). The Demand for Capital Market Returns: A New Equilibrium Theory. *Financial Analysts Journal*. https://doi.org/10.2469/faj.v40.n1.22

Jin, Y., Guo, J., Zhou, X., & Li, S. (2016). IPO market cycles and expansion curse : Evidence from Chinese IPO market IPO market cycles and expansion curse :

Evidence from Chinese IPO. *Investment Analysts Journal*, *0*(0), 1–17. https://doi.org/10.1080/10293523.2016.1201291

Kanja, J. N. (2014). *THE EFFECT OF INITIAL PUBLIC OFFERINGS ON THE STOCK RETURNS OF*.

Kiymaz, H. (2000). The initial and aftermarket performance of IPOs in an emerging market: Evidence from Istanbul stock exchange. *Journal of Multinational Financial Management*. https://doi.org/10.1016/S1042-444X(99)00027-4

LEE, C. M. C., SHLEIFER, A., & THALER, R. H. (1991). Investor Sentiment and the Closed-End Fund Puzzle. *The Journal of Finance*. https://doi.org/10.1111/j.1540-6261.1991.tb03746.x

Lee, S. M., & Edmonston, B. (2011). Age-at-arrival's effects on asian immigrants' socioeconomic outcomes in Canada and the US *International Migration Review*. https://doi.org/10.1111/j.1747-7379.2011.00857.x

Liu, S. (2015). Investor Sentiment and Stock Market Liquidity. *Journal of Behavioral Finance*. https://doi.org/10.1080/15427560.2015.1000334

Loughran, T., & Ritter, J. R. (2002). Why Don't Issuers Get Upset About Leaving Money on the Table in IPOs? *Review of Financial Studies*, *15*(2 SPEC.), 413–443. https://doi.org/10.1093/rfs/15.2.413

Louzis, D. P., Vouldis, A. T., & Metaxas, V. L. (2012). Macroeconomic and bank-specific determinants of non-performing loans in Greece: A comparative study of mortgage, business and consumer loan portfolios. *Journal of Banking and Finance*. https://doi.org/10.1016/j.jbankfin.2011.10.012

Lowry, M. (2003). Why does IPO volume fluctuate so much? *Journal of Financial Economics*. https://doi.org/10.1016/S0304-405X(02)00230-1

Lowry, M. B., & Schwert, G. W. W. (2005). Biases in the IPO Pricing Process. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.260278

Lowry, M., Officer, M. S., & Schwert, G. W. (2010). *The Variability of IPO Initial Returns*. *LXV*(2).

Pagano, M., Panetta, F., & Zingales, L. (1998). Why do companies go public? An empirical analysis. *Journal of Finance*. https://doi.org/10.1111/0022-1082.25448

Sherman, A. E., & Titman, S. (2005). Building the IPO Order Book: Underpricing and Participation Limits With Costly Information. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.235926

Sohail, M. K., & Nasr, M. (2007). Performance of initial public offerings in Pakistan. *International Review of Business Research Papers*.

Tran, A. L., & Jeon, B. N. (2011). The dynamic impact of macroeconomic factors on initial public offerings: Evidence from time-series analysis. *Applied Economics*. https://doi.org/10.1080/00036840903493267