

WAVES OF THE IPO MARKET: THE HISTORY AND EMERGENCE*

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Article history:

Article No. 29/2021
Received 21 January 2021
Received in revised form
12 February 2021
Accepted 3 March 2021
Available online
29 June 2021

JEL: D82, E22, G24,
G32

Keywords:

IPO, IPO waves, IPO
cycle, Initial Public
Offering,
clustering

Abstract

Subject. The article considers the phenomenon of clustering in the initial public offering (IPO) market.

Objectives. The aim is to perform a critical analysis of literature on the IPO market behavior and determine the optimal moment of company's listing on stock exchange.

Methods. The study draws on analytical methods of information gathering and processing, as well as the comparative analysis.

Results. The paper summarizes results of works by researchers on the IPO markets clustering, defines criteria for successful listing on stock exchange, unveils a number of factors affecting the market dynamics. It also determines possible ways and indicators to predict the onset of the hot issue market for initial public offerings.

Conclusions. Macroeconomic factors and investor sentiment explain the clustering of IPO markets. Given that the waves in this market are of short-term nature, the macroeconomic performance is an inaccurate indicator, when predicting the onset of waves of initial public offerings, as opposed to investor sentiment. Indicators, like the reversal of the stock market from recession to growth, positive market dynamics for three months, and a period of low imputed volatility may serve as indicators of the imminent onset of a wave of initial public offerings. A successful IPO of a company operating in a particular industry may lead to an increase in the number of transactions of similar companies from this industry, provided that the stock market continues to show a positive trend during the period, which is necessary to get ready for an IPO.

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The editor-in-charge of this article was Irina M. Vechkanova
The authorized translation by Irina M. Vechkanova

Please cite this article as: Belyaev V.A. Waves of the IPO Market: The History and Emergence. *Digest Finance*, 2021, vol. 26, iss. 2, pp. 158–169.
<https://doi.org/10.24891/df.26.2.158>

Introduction

The Russian stock market has significantly changed for the recent two decades of its development. It is now inhabited by different investors. Its regulatory framework has been

* For the source article, please refer to: *Беляев В.А. Цикличность на рынке IPO: история и факторы возникновения // Финансовая аналитика: проблемы и решения. 2021. Т. 14. № 2. С. 190–207.*
URL: <https://doi.org/10.24891/fa.14.2.190>

modified too. Despite financial crises and political challenges, many companies decide to raise funds through Initial Public Offering (IPO).

What mainly stakeholders pursue in IPO are high ratings for their companies and high earnings on their stock. Going public, companies should consider some aspects that influence the ultimate success of an IPO.

The situation in the stock market is a principal factor to consider, in terms of the expected returns and ratings of companies at a given period of time. As business leaders and stakeholders try securing as high business ratings as possible and raise as much funds as possible by selling their stocks as part of IPO, the issue of stocks often takes place when the market is high and investors are ready to endeavor risky deals. To say it in other words, the periods of *overheated* or *hot issue* markets.

As a result of such behavior of investors and stakeholders, the IPO market gets clustered into periods when many IPO deals take place. The phenomenon is called cycles or waves of the IPO market, which open the so called window of opportunities, i.e. the period when the demand for the company's stocks and ratings can reach their peaks.

This study focuses on the critical analysis of literature on IPO waves and a choice of the best time for IPO. The phenomenon of IPO waves is investigated by many Russian and foreign scholars.

What is a successful IPO and Hot Issue Market?

Initial Public Offering involves several parties, with each of them trying to meet their own goals. The issuing company mainly pursues to increment earnings by selling shares various investors. Despite the potential conflict of interest, the underwriter mostly has the same goal in mind as the issuing company, since an increase in the demand and price for stocks depends the underwriter's proceeds.

From perspectives of the issuing company and the underwriter, IPO will be a success if stocks are completely allocated at a quotation, which is satisfactory for the shareholders of the issuing company. From perspectives of the investor, IPO serves for deriving income by buying the company's stocks. IPO is successful for investors if the value of stocks increases during trading. In other words, a successful IPO balances all the goals of the parties involved.

In case of the hot issue market, there is the strongest probability that all the parties meet their goals, since investors demonstrate the high demand for stocks offered during the above period. Therefore, the stocks are completely allocated, thereby often allowing issuing companies to use an option contract for the additional placement of stocks during IPO and increment their proceeds. Both IPO parties and the scientific community attentively follow high earnings on the company's stocks.

High earnings on shares on the first trading day is traditionally explained with the high interest of investors in the company's shares, but also with the understatement of the issuing company during IPO. Why the company is undervalued during IPO is the most

critical issues of IPO, since businesses sometimes lose a significant amount of proceeds from their stocks.

However, considering goals of all willing IPO parties, IPO can be deemed successful if the issuing company's stocks are fully allocated, with earnings on the first trading day being positive. As some studies prove, stocks of companies going public certainly fail to reach indices of the market profitability in the mid-term time horizon. However, the indices can be measured of success in terms of IPO itself [1].

Studying the clusterization of IPO market, authors mention hot issue markets and cold issue markets. Although many authors do not have clear numbers and figures to determine whether the market is hot or cold, basically, hot issue markets stand for the situation when the price for the company's stocks grow on the first trading day or in the first trading month, with the number of companies going public rising significantly within a short period of time.

During such periods, investors are more ready to take risks. Therefore, the demand for issuing companies' stocks often outgrow the supply. With the wave tendency of IPO markets, the period can be compared with a rising wave of IPO, followed by a fall, or the cold issue market. Issuing companies' stocks generate low earnings on the first trading day in the cold issue market, with IPO deals also being small in numbers.

According to R.G. Ibbotson and J.F. Jeffrey [2], hot issue markets are defined as periods when the average performance of stocks of companies going public is abnormally high in the first trading months in comparison with the overall market performance. It is noteworthy that the authors believe that the performance of cold issue markets should not necessarily be negative.

Referring to first day price trends, K.V. Penzin points out three consecutive waves of the IPO market [3]:

- hot issue market, i.e. the opening price is more than 15 percent as high as the offer price;
- warm issue market, i.e. the opening price is less than 15 percent as high as the offer price;
- cold issue price, i.e. the opening price is lower than the offer price.

The History of the Problem

Researches had studies waves of the global economy throughout the 20th century. J. Kitchin, C. Juglar, S. Kuznets, J. Schumpeter and other discovered and proved that the economy evolves in waves, explaining why such waves rise. However, the clusterization of the IPO was first mentioned by R. Ibbotson and J.F. Jeffrey only in 1975. They scrutinized trends in companies' prices after IPO and found that markets were hot and cold [2].

Markets were primarily classified by earnings on the company's stocks within the two trading months, compared to S&P. The authors showed how IPO deals got clustered within a decade (1960–1970) and confirmed that investors can derive a 16.83-percent income from IPO as compared with the market performance for a month, net of transaction costs.

As the onset of the hot issue market and cold issue market can be predicted, investors have an opportunity to aggregate all their investments in the most promising IPOs with respect to the market phase. They can also avoid putting up money during the period of the cold issue market, since it demonstrates low or negative earnings.

The authors probate the hypothesis stating that issuing companies should offer their stocks during the period of the hot issue market in order to increment their IPO proceeds as much as possible. Issuing companies strive to reduce the underestimation and offer stocks at a price which would be as fair as possible. The researchers make an assumption that offering stocks in the cold issue market does reduce the underestimation in contrast with the long-term fair price. According to the findings, the issuing company derives the highest earnings on stocks in the period that follows the low earnings period, i.e. during the period of the hot issue market.

Although the authors do not explain what engenders hot issue markets and factors influencing the behavior of investors or issuing companies, IPO clusterization became an agenda in the scientific community.

Inquiries into hot issue markets were continued by J.R. Ritter [4], confirming that there did exist IPO clusters where IPO deals increase during the period after Ibbotson and Jeffrey's publication, i.e. 1975 through 1982. In the respective paper, J.R. Ritter pays special attention to 1980 when there was a considerable growth in earnings on IPO among mining companies. The growth reached 48 percent, indicating that IPO may get clustered by certain sectors. To verify the phenomenon, earnings of companies from other sectors did not exceed the mean return on IPO for the previous years. According to J.R. Ritter, such abnormal return arises because underwriters influence the market, trying to secure greater income during the oil and gas boom.

The sector-specific clusterization had been actively investigated in the early 2000s, when the market saw a surge in the IT segment.

Inquiries into IPO clusterization per sector were continued by J. Lerner [5]. He studied the dynamics and clusterization of biotechnology companies going public within 1978 through 1993. J. Lerner found out that venture-backed biotechnology companies tended to go public only during the period of the hot issue market and employed other sources of finance at all other times.

As the author said, biotechnology company is much more likely to be financed as a result of IPO, if the sector index of biotechnology companies has been growing from the recent several months.

As J. Lerner discovered, biotechnology IPOs take place when equity valuations are high. The conclusions corroborate assumptions on the clusterization of the IPO market due to trends in prices for identical companies' stocks.

L.M. Benveniste, W.Y. Busaba and W.J. William carried on studies into IPO clustering by industry [6]. As they hold, the company's ratings strongly depend on an industry. When a company from a certain industry goes public, other companies from the same industry can measure their potential rating for IPO purposes.

If the issuing company successfully offered its stocks, its rivals in the industry are very highly likely to go public in the nearest future.

L. Pastor and P. Veronesi also examined trends in the IPO market in terms of price variations in the stock market [7]. Opposed to the hypothesis stating that the quantity of IPOs depends in the information asymmetry and increases during periods when the market is overvalued, the authors attempted to explain why the number of IPOs change with respect to the short-term dynamics of prices, a rise or fall in prices within several months, rather than the overall market assessment.

Many provisions of the study echo that by J. Lerner concerning IPO of biotechnology companies. However, the authors focus on the overall view of the IPO market, without considering industry-specific aspects.

They devised a model to determine the best time for IPO, referring to market conditions. Optimal IPO timing depends on three parameters, such as the expected market return, expected aggregate profitability, and uncertainty about the average future profitability of IPO.

They provide theoretical and empirical underpinning of the dependency of IPO dynamism on the three parameters and demonstrate how market conditions are pegged to prices in the stock market, which is measured by the ratio of the market value of stocks to their balance sheet one (P/B).

As a conclusion, L. Pastor and P. Veronesi state that IPO waves emerge when the expected market return falls, and the expected aggregate profitability or uncertainty about the average future profitability of IPO increase.

According to their model, periods of high and low returns create IPO waves, while the issuing company decides to go public, referring to the expected value of its stocks. If the company's stocks are expected to be underestimated, the company postpones the IPO deal.

As L. Pastor and P. Veronesi show, the volume of IPOs depends on the variation of the aggregate P/B ratio, however is not pegged to its level as a whole. To say in other words, the short-term dynamics matters, rather than the general market assessment at a given period of time. However, the study neither confirms, not debunks the fact that companies try to go public during the obvious overpricing and high information asymmetry.

Trends in IPO volume were also studied by R. Rajan and H. Servaes [8]. However, in their research, the authors focused another important factor, such as the expected performance of IPO. They relies upon forecasts on the return of investment banks' IPOs. Predicted profitability of recent IPOs reflect investors' intentions. Very positive expectations of the future earnings on stocks in a certain industry serve as an alternative metric of positive emotions in the market.

According to their study, the number of IPOs in a certain industry and in a certain period of time has a positive correlation with forecasts on long-term growth rates of proceeds from recent IPOs from the same industry.

Putting it differently, successful IPOs in a certain industry increase the probability of IPO among companies from the same industry in the nearest future provided that long-term growth rates are reasonably expected. Higher growth rates, indeed, necessitate fund raising to finance the corporate growth. The study, like Lerner's one, confirms IPO bundling in some industries and explains why it is possible.

As another result, companies with the highest expected growth rates significantly underperform in comparison with indices, while companies with the lowest expected growth rates perform better than the market. As explained, investors believe that high long-term growth rates are overestimated, getting quickly disappointed with the company's prospects.

The paper by M. Lowry and G.W. Schwert [9] has much in common with that by R. Rajan and H. Servaes [8]. The authors investigate the relation between earning on the company's stocks on the first trading day and subsequent trends in IPO volumes. As they concluded, the positive correlation stems from the predictable part of initial returns, referring to the information collected when IPO is prepared. During a road show, underwriters do a survey of investors about their expectations of the company going public.

The information is a determining factor of the offer price and for private companies which considers such estimates optimal and also contemplate going public in the nearest future.

Positive assessments of investors lead to higher earnings on the company's stocks on the first trading day, thus giving way to more IPOs. The indicator is virtually close to investors' sentiment, determining the company's potential for IPO purposes.

M. Lowry made a valuable contribution to studies into IPO waves. Many researchers focuses on the dependency of the IPO market trends solely as a derivative indicators of a price in the market, neglecting other factors that might underlie IPO waves M. Lowry sets three hypotheses in her paper, which were to explain trends in IPO volumes.

As the first hypothesis goes, IPO cycles coincide with economic cycles, i.e. the demand for financing is higher during an economic growth across the entire economy. Therefore, more and more companies resort to IPO as a means of finance.

In such circumstances, the company goes public, when the benefit from IPO-based finance reaches its maximum level. Analyzing a correlation of IPO numbers and business activity and, subsequently, the need in additional funding, M. Lowry scrutinizes the

relation between IPO numbers, GDP dynamics, growth in real investment, variation of the number of businesses and the real average growth rate of revenue

According to her findings, the factors are important in explaining the dynamics of IPO volumes.

S.G. Glavina also displays a correlation between economic growth and IPO market trends, inferring that IPO do correlate with macroeconomic indicators. The author also proves the fact that the amplitude of waves of the global IPO market is much less than that of regional markets¹.

However, although the dynamics of GDP does correlate with IPO waves, I should stress that IPO waves are much shorter by nature than a wave of economic growth. IPO waves often last several months. Therefore, despite an obvious correlation of the phenomena, it is difficult to predict an IPO wave, relying on simply economic growth indicators.

The assumption that economic growth correlates with trends in the IPO market stems from the hypothesis stating that companies more need financing during an economic rise, thus making them search for sources of funds. However, S. Benninga, M. Helmantel, O. Sarig [10] prove that companies will not endeavor IPO if they just need financing for their capital expenditures. Furthermore, according to W. Kim, M.S. Weisbach [11], even if the company does not have fundamental investment plans, its business leaders may undertake IPO any way, if the market is hot, so that they could get use of the situation and sell their stocks at higher prices.

A. Alti's research supports the above results [12], saying that companies initiating IPO during the period of hot issue market needed less finance than those that went public during the period of the cold issue market.

As the findings show, companies went public in order to get use of the right time for raising funds.

According to the second hypothesis, the information asymmetry alter IPO costs. As it is beneficial for companies to go public at the moment of overpricing, the market underprices stocks of the company when it declares about its intention to go public.

In such circumstances, the company will undertake to raise fund through IPO only if benefits exceed respective costs and additional costs incurred due to the information asymmetry. If information asymmetry costs are too high, the company declines IPO intentions and uses other sources of finance.

As the information asymmetry is unobservable as it is, M. Lowry introduces two indirect indicators for the analysis, i.e. the variance of abnormal price changes when financial results of public companies are released, and the variance of predicted income of public companies.

¹ Glavina S.G. Clustering of Effective Initial Public Offerings on the Russian IPO Market. 8th Int. Sci. Conf. Analysis of International Relations 2017, 21–22 June, Poland, Katowice, 2017, pp. 41–47.

As the above indicators relate to profit, they should reflect the uncertainty of the market actors about companies. The fact that the market seriously responds to the release of financial results means that the company's leadership possesses material information to release, which is evidence of the high information asymmetry.

According to the findings, the information asymmetry is of statistical importance, however, not being economically significant. It is just supplementary.

The third hypothesis concerns changes in the investors' optimism, which subsequently influences IPO costs and engenders IPO waves. In some periods, investors are extremely optimistic about the future dynamics of the market and income, being ready to pay for the company more than it is really appraised. In such periods, IPO costs are minimal, creating a wave of IPOs. The hypothesis is close to the one proposed by R. Rajan, H. Servaes [8]. However, M. Lowry applies another approach to evaluating investors' optimism about the market. In addition to returns on stocks of IPO companies, the author also uses discounts negotiated by closed mutual investment funds, since most investors who put up money in this tool are individual investors, with their dynamics being more representative in terms of the general sentiment of investors.

The findings corroborate the fact that investors' sentiment is a considerable factor influencing IPO volumes [13].

The factor is material, because it allows forecasting the beginning of IPO waves. However, a timing lag should be taken into consideration for forecasting, since the preparation for IPO takes on average from three to six months. This is substantiated in other paper by M. Lowry [9].

According to findings, successful offering of stocks can ignite a growth in an IPO wave in half a year. The hypothesis mainly explains the nature of IPO waves, relying upon, on the one hand, on the intention of the issuing company's leadership to offer their stocks at a high price, and on the investors' optimism who are ready to put up money in IPO, on the other hand.

J. Helwege and N. Liang made a significant contribution to studies on IPO waves [14]. Technological progress and innovation hypothetically induce IPO waves. The hypothesis was suggested by M. Lowry, indicating that technological progress in IT, first of all, made some companies seek for finance and subsequently go public [13]. However, the authors debunk the hypothesis, proving that the clustering of some industries takes place not only in hot issue markets, because the IPO market and its waves repeat more frequently than innovation emerges.

A growth in technological IPOs, which was primarily explained with the technological advancement, is not unique in terms of IPO waves. The companies from the technological sector also preferred to offer their stocks during the period of the hot issue market. Furthermore, many companies of the sector did not manage to offer their stocks during the period of the hot issue market and postponed their IPO plans.

As one of the hypothesis on hot issue markets holds, the period of the hot issue market is the time for low quality IPO, since earnings on their stocks is lower in the long run than those that offered their stocks during the period of the cold issue market. The reason may be that small companies with higher inherent risk offer their stocks during the period of the hot issue market [15].

However, according to J. Helwege and N. Liang, the quality of companies does not differ across periods of the IPO market. Furthermore, as they found out [14], IPO markets are obviously clustered by industry neither during the period of the hot issue market, nor the cold issue market. The conclusion does not contradict studies by J. Lerner, L.M. Benveniste and W.Y. Busaba [5, 6], where they investigate the possibility and causes of industrial clustering. It is a testimony to hot issue markets reflecting the overall situation in the IPO market.

Subsequent proceedings analyze the behavior of companies just during the period of the hot issue market. As S. Banerjee, U. Güçbilmez, P. Grzegorz state in their research [16], rapidly growing companies going public in the very beginning of the hot issue market are much more underpriced. However, the dynamics of their stocks significantly outperforms the dynamics of stocks offered by companies that transact in a later period of the hot issue market. Consequently, such companies stand a change of getting compensated for their initial underpricing by offering additional stocks in the market. The author confirms conclusions empirically, but gives no instruction how companies should determine the beginning of an IPO wave and chose the optimal timing for IPO.

F. Batnini, M. Hammami [17] prove a correlation of the stocks market trends and the number of completed IPO. Like M. Lowry, the authors examine whether there is a timing lag between the return on the stock market and the emergence of IPO waves. They conclude that the six-month dynamics of stock market significantly influences managers of companies that intend to go public. In this time horizon, the positive return helps making decisions on the preparation for IPO.

However, if the IPO decision is followed by a recession, managers choose to reschedule the deal. The authors stress that companies would better prepare for IPO when the market recovers from a recession to growth. The study supplements conclusions made by J.R. Ritter and M. Lowry on the impact of price trends and investors' sentiment on the IPO market.

M.F. Dicle, J. Levendis [18] explain IPO trends with the market volatility variation. The authors refer to the expected market volatility measured with VIX index, rather than the historical dynamics of the stock market, as it was previously done.

IPO clusters originate in periods of low expected volatility as the uncertainty falls in the market, thus reducing IPO costs, facilitating the valuation of companies and mitigating risks for investors. IPO waves primarily surge, because the volatility tends to get clustered. According to the findings [18], periods of low expected volatility precede IPO waves. The authors give a new view of the prediction of IPO waves through a simple and easily accessible tool, which by nature correlated with investors' sentiment.

Conclusion

The IPO market is one of the most lucrative sources of finance. It provides some additional benefits from listing companies on the stock exchange. However, to raise as much funds as possible through IPO, the issuing company should choose the right timing for going public.

Many researchers investigated the dynamics of IPO markets and concluded that it evolves in waves. The most preferable scenario for the issuing company is to offer its stocks during the period of the hot issue market in terms of the probable outcome. Scholars made attempts to determine factors, which are most critical for IPO waves, since they would help forecast the onset of the hot issue market period. As studies show, IPO market clustering mainly stems from macroeconomic factors and investors' sentiment.

Considering that waves of IPO markets are more short-term than cycles of economic growth, researchers reviewed whether it is possible to predict IPO waves by market factors, first of all, the stock market trends and investors' sentiment. Phenomena, such as the recovery from recession to growth and positive expectations of investments about companies' pricing, may signify that an IPO wave is coming.

If the company succeeded in going public, other companies of the same industry are highly likely to contemplate IPO, provided that the market is not about to fall into a recession within the time horizon for the IPO preparation. According to studies, a new IPO wave may be expected if the market turns from recession to growth and the stock market demonstrates positive trends for three months. The clusterization of the expected volatility is another indicators of a new IPO wave.

It is worth mentioning that a growth in sectoral IPOs usually coincides with the overall growth in IPOs in the market, with a rise in an IPO wave in certain industries being very rare given the overall cold issue market. The technological progress, as a factor, can motivate companies for going public, however, it does not create IPO waves by itself.

Notably, despite the availability of information, it is very difficult to accurately predict the beginning of an IPO wave, because investors' sentiment changes quickly, being a principal predictor of a new IPO wave, as studies show. With the IPO preparation time in mind, the clustering process may reach its peak later or even hold off at all in case of the negative market dynamics.

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