Determinants of involuntary delisting in Athens Stock Exchange

Yiannoulis Ioannis
yy@staff.teicrete.gr
TEI of Crete, GR

Abstract

Corporate governance is a fairly new concept which has been put in practice because of the needs of companies to constantly perform better; and it is this need that has made corporate governance so necessary today.
This paper examines the incidence of involuntary delisting for Athens Stock Exchange (ASE) companies for IPOs that took place in the period between 1996 till 2005. Specifically I test whether the companies that were placed in ASE this period delist involuntary or squeeze out or are till now listed by comparing mainly accounting variables.

Keywords: Corporate Governance; Athens Stock Exchange; delisting; squeeze out

JEL classification codes: M48, L25

Introduction

Initial Public Offering (IPO) is one of the most significant events in a firm’s history, as it not only requires the IPO firms to undergo some structural changes and modifications in personnel and operations, but also exposes the IPO firms to the risk of being acquired, merged or delisted involuntary from the stock exchange. The adverse effect of involuntary delisting on shareholders’ wealth indicates that this is the crucial economic issue, especially in the case of Greece, where the number of involuntary delisting cases taking place after the issuance of the new listing rules in 2005 is quite large. Specifically, about 30 per cent of Greek listed firms in the Athens Stock Exchange (ASE) were involuntary delisted over the period 2006 to 2014.

A few studies have been undertaken on the Greek stock market, such as Balios et al. (2015) and on other stock markets such as Algebaly et al. (2014) on the Egyptian stock market, (EGX), Bessler et al. (2012) for German firms in New York Stock Exchange (NYSE), Daughety and Georgieva (2011) for NYSE, Chaplinsky and Ramchand for foreign firms on NYSE, Charitou and Louca (2007) for NYSE, Martinez and Serve (2011) for the French stock market, Mangena and Chamisa (2008) on the South Africa stock market (JSE), Pour and Lasfer, (2013) on London Stock Exchange (LSE) and You et. al. (2012) for 39 different countries.

Findings from such studies are beneficial for A) assessing the Greek IPO firms’ readiness to go public and for forecasting their IPO involuntary delisting and B) control and reduce involuntary delisting occurrences. These studies, as they rely on accounting and market variables, allow us to evaluate the relevance of the information contained in the prospectuses in order to predict the delisting status of IPO firms.

I contribute to the existing literature by testing a comprehensive set of potential indicators for involuntary IPO delisting rate; some
of them are new such as age and accounting variables. In addition, several related theories are tested in this study, namely agency cost, Signaling and Marketing events, Efficient monitoring and Trade off.

Involuntary delisting is a traumatic event both for firms and shareholders; Macey et al., (2004) find huge costs of delisting using a sample of NYSE firms delisted in 2002. More specifically, they find that share prices fall approximately in half, percentage spread triples and stock price volatility doubles when a stock is delisted. Shumway (1997) also documents an average delisting return of -30% for firms delisted during 1962-1993. Moreover, Li and Zhou, (2005) in their sample of IPOs during 1980-1999, firms on average lost more than 80% of their initial market value before delisting date.

The remainder of the article is organized as follows: Section 2 presents an overview of Athens Stock Exchange (ASE) for the years between 1996 till 2002, Section 3 reviews the theoretical and empirical literature on the determinants of involuntary delisting rate, Section 4 is dedicated to data and research design which begins with the sampling procedure followed by the measurement of variables included in the study and ends with discussion of the logit model. In Section 5 the results are presented and Section 6 summarizes the paper’s conclusions.

Hellenic Capital market - Athens Stock Exchange (ASE)

In order to put things in a context, one should be reminded of the recent economic history of the country: Greece industrialized in the early post-World War II and, despite a very rapid initial growth, it later experienced stagnation and structural economic problems for the two decades until the mid-1990s. Greece’s entry in the EMU in 2001 resulted in the establishment of a macroeconomic environment of low interest rates and limited foreign country risk. Within this new environment, the Greek economy sustained its high growth despite the slowdown in the global economy, which aggravated after the 11 September 2001 terrorist attack in the US. Accordingly to preliminary estimates, GDP increased in 2002 by 3,8 per cent, surpassing for the seventh consecutive year the EU average growth rate. During this period of positive economic performance, the market capitalization of the ASE grew faster than any other capital market in the developed world, the number of companies listed increased substantially and a long-term effort for the modernization and supervision of the market has taken place.

The Athens Stock Exchange (ASE) suffered accordingly and it was not upgraded to a mature capital market until early in 2001, when, after a spectacular performance between 1995 and 2000, the Greek economy met the Maastricht criteria and Greece joined the Economic and Market Union (EMU). From 1997 until September 1999, the ASE index experienced a six-fold increase. However, since the third trimester of 1999, the Stock Exchange has suffered losses that on the average account more than 90 per cent of its peak value. Approximately 350 companies, with combined market capitalization of about 10,5 billion Euros, were listed in the ASE in December of 2002. According to Spanos et al. (2004 - page 4) "one should also be reminded of the recent experience of the Greek capital market. In particular, the Greek capital market experienced a cycle of self-fulfilling expectations during the second and third quarters of 1999. The massive entrance of individual and institutional investors in the capital market, mostly through placements on small and medium capitalization stock rapidly, increased both stock prices and
liquidity. The cycle of self-fulfilling expectations resulted in a significant divergence between actual prices and prices justified by corporate fundamentals (equilibrium prices). However, the bubble phase has an end. The Greek capital market’s severe underperformance in 2000, 2001, and 2002 largely resulted from the previous speculative process”. These facts are presented in the following table:

Table 1: Athens Stock Exchange Market

<table>
<thead>
<tr>
<th>Year</th>
<th>Value of transactions</th>
<th>Market cap. of IPO</th>
<th>ASE index</th>
<th>Value of transactions</th>
<th>Market cap.</th>
<th>% change</th>
<th>Value of transactions</th>
<th>% of GDP</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>17,081.4</td>
<td>28,793.3</td>
<td>39.6</td>
<td>59</td>
<td>58.5</td>
<td>1.5</td>
<td>414,2</td>
<td>85.1</td>
<td>-3</td>
</tr>
<tr>
<td>1998</td>
<td>41,708.1</td>
<td>67,024.8</td>
<td>63.6</td>
<td>1,157.2</td>
<td>1,861.4</td>
<td>85.1</td>
<td>306,2</td>
<td>85.1</td>
<td>-3</td>
</tr>
<tr>
<td>1999</td>
<td>173,027</td>
<td>197,537</td>
<td>95.5</td>
<td>1,840</td>
<td>102.2</td>
<td>8.8</td>
<td>1,075.6</td>
<td>137.8</td>
<td>-23.5</td>
</tr>
<tr>
<td>2000</td>
<td>101,675.7</td>
<td>117,956.3</td>
<td>95.5</td>
<td>2,557.8</td>
<td>39</td>
<td>8.8</td>
<td>1,062.8</td>
<td>32.5</td>
<td>-16.3</td>
</tr>
<tr>
<td>2001</td>
<td>40,529.8</td>
<td>96,949.5</td>
<td>74.1</td>
<td>1,075.6</td>
<td>-137.8</td>
<td>-23.5</td>
<td>1,062.8</td>
<td>-32.5</td>
<td>-16.3</td>
</tr>
<tr>
<td>2002</td>
<td>24,771</td>
<td>65,759.7</td>
<td>46.9</td>
<td>92,5</td>
<td>-1,062.8</td>
<td>-32.5</td>
<td>1,062.8</td>
<td>-32.5</td>
<td>-16.3</td>
</tr>
</tbody>
</table>

Source: Athens Stock Exchange Factbook 2002

Ownership dispersion in Greece is considered as middle to low. International comparisons suggest that in terms of ownership structure Greece ranks in the middle of 49 countries, ownership being measured by the share of the three largest shareholders in the largest ten non-financial domestic private firms (La Porta et al., 1998). Greece presented high concentration of ownership among the civil law countries, with 67 per cent average ownership" (La Porta et al., 1999)

In a 2001 study of the Greek Capital Market Commission, it is stated that the dispersion in Greece is considered as middle to low (35,7 per cent based on shareholders who hold less than one per cent of stock and 47,22 per cent based on shareholders who own less than five per cent). Thus the decision making process is largely controlled by big shareholders. Small and medium-sized enterprises are mainly those that present a family character, while the bigger firms tend to have a higher dispersion (Avlonitis and Ninassiou, 2001).

According to this study, in 370 listed companies in Greece average ownership dispersion was 47,22 per cent when the major shareholder is defined as the shareholder owning at least 5 per cent. In total, according to that study, the 370 listed companies were held by approximately 1.000 shareholders and the major shareholders per listed company were three.(Spanos et al., 2004, pages 3-6).

The family form is an important and common form of business organization in Greece; the common feature among most family firms is that the ownership is closely tied to a group of people - the family, which is involved in the direct management of the firm (Tsipouri and Xanthakis, 2004; Spanos, 2004; Mertzani, 2001). As Spanos (2004 et

1 In order to construc measures of ownership concentration La Porta et al. (1999) the authors took, for each country, the average and the median ownership stake of the three largest shareholders among its ten largest non-financial, privately owned domestic firms.

2 Dispersion is calculated 45,7 per cent when the major shareholder is defined as the shareholder owning at least 1 per cent.
al., page 5) states “The results indicate that competition for control at the company level is low. Large families usually control most of the small and medium sized companies and members of the controlling families are usually serving as the top manager. Large shareholders may act as an effective monitoring mechanism of management and, thereby, enhance firm performance. However, controlling blockholders can use their power to extract private benefits, at the expense of minority shareholders. This kind of expropriation leads to sub-optimal levels of investment by minority. Therefore, the agency problem arises as a conflict between strong blockholders and weak minority owners than between strong managers and weak owners”.

As Lazarides (2007, page 2) states “has the same characteristics as Spain, Portugal and other countries that are ranked in the Continental Europe corporate governance system (Franks et al., 2008; Kaufmann et al., 2008; Shleifer and Vishny, 1997)”. The principle characteristic among the majority of the family firms is that the main owner (family) is usually involved in the key decision-making of the firm (Spanos et al., 2004; Melin and Nordqvist, 2000; Daily and Dollinger, 1992).

This feature is crucial for the governance analysis of the family firms; Melin and Nordqvist (2000) define Corporate Governance in family firms as “the processes, principles, structures and relationships that help the owner of the firm realize his particular vision, goals and objectives”. Particular emphasis is given on the actual way that the owner family exercises its power and influence over the firm; however family firm can be a real source of competitive advantage for the firm (Mustakallio and Valkamo, 2002; Cadbury, 2000). A very common argument favoring family firms is that agency costs are minimized, since the owner family and the management are the same (Randoy et al., 2003; Schulze et al., 2003; Fama and Jensen, 1983; Jensen and Meckling, 1976). As Spanos et al., (2004, page 3) state “Altruistic behavior and trust can also produce many advantages in the family firm’s context e.g. collective ownership by all family members working in the firm, reduction of information asymmetries among family members and commitment of corporate leaders to the firm’s long-term performance and strategy”. However, family firms are associated with high costs and inefficiencies; for example as Spanos et al. (2004, page 3) state “confusing family and business matters, family owners could favor family interests over the firm’s interests (e.g. non-family shareholders) because of loyalty toward family... Family firms may encourage internal labor market schemes favoring family members (within-family promotion), rather than competent recruitment processes. Reducing the quality of applicants for executive managerial positions may eventually cause significant monitoring cost.

Given the high cost associated with involuntary delisting, understanding its economic determinants become an important issue. In my study, I hypothesize and show that specific accounting ratios in the IPO year have significant power in predicting subsequent delisting of newly issued firms. IPOs associated with more aggressive earnings management are more likely to delist due to performance failure and they tend to delist sooner, while IPOs associated with less earnings management are more likely to be merged or acquired.

3 See in addition Berghe and Carchon, 2003; De Paola and Scoppa, 2001; Kang, 2000; Stark and Falk, 1998.
The interpretation of my evidence is simple; accounting measures are a corporate decision endogenous to the fundamentals of the issuing firm.
Literature review on the determinants of involuntary delisting and corporate governance in Greece

The financial scandals and corporate failures in the 1980s reignited the debate on the most appropriate mechanisms for making corporate boards more effective. Against this backdrop and from the early 1990s and increasing number of developed, developing and emerging markets have published corporate governance guidelines and codes of best practice (Demirag et al., 2000; Gregory, 2004 and Mallin, 2004). Corporate governance concerns systems which can ascertain that corporate investors can obtain a return on their investments (Shleifer and Vishny, 1997). Corporate governance ranges throughout countries and firms; a higher quality of governance allows firms to gain access to capital markets more easily, which is greatly important for firms which mean to increase their funds. The agency theory requires the separation of ownership from the management of a firm, but this diversification leads to agency costs since managers rely on information asymmetry to maximize their own personal benefit. The agency theory was the start for studying whether executive rewards are determined according to this theory; since agents or managers have their own self-serving reasons to perform acts which may be harmful to the principal, the agency problem constituted the attempt to link unit performance measurement initially to executive, but finally to all employees’ compensation.

Corporate governance’s modern side concentrates on how Chief Executive Officers impose on shareholders several governance reforms whose purpose is to surround and protect management, by limiting and controlling the power that shareholders have.

As far as Spanos (2005) is concerned, today’s corporate governance is looking for the means to ensure suitable returns on suppliers’ investments. Usually this is the case of an economy with good economic policies which attracts multinational investors; through the development of globalization, more capital has been created in countries which have suitable legal systems that give protection to investors. While there is no clear evidence of a link between corporate performance and corporate governance, there is a strong perception that the participation of outside independent directors is a key indicator of good firm performance. Additionally, the role of executive compensation in corporate governance has an interesting role; compensation contracts place more importance on performance characterized by accounting measures, such as return on assets and not on stock-based measures such as market’s returns, which are feeble under context of corporate governance. Greater importance on accounting measures together with inferior governance implies that the CEO is using the bargaining power to raise the level of typical compensation but also to decrease the difference in compensation.

Tsifora and Eleftheriadou (2007) examined the mechanisms of corporate governance in listed companies in ASE for years 2002 till 2004 and the connection between governance and firm performance. They specifically examined the size of the board and the ownership percentage based on information from websites. The first hypothesis was that firms with larger Board can better control the firm and the companies with larger boards have better performance than companies with smaller boards.

Also firms which introduced corporate governance mechanisms are characterized with higher profitability ratios. Their results
supported the above hypotheses for the manufacturing sector. There are different indicator categories of firm performance, but I can distinguish two: the first focuses on the evaluation of profit efficiency. In other words, it closely measures the profit that a best-practice firm could earn when facing its own exogenous conditions. Usually, it examines factors that are not part of agency costs. Its main advantage is that it is able to address some of the difficulties in other performance measures, but it also imprecise and embodies a measurement error. The second category includes the financial ratios and stock market returns which are indicators that are typically industry based and adjusted and do not account for important differences across firms within an industry, consequently providing a more complete picture. In the second category, there are three different measures for the evaluation of a firm’s performance, which can be used in testing the predictions of different agency costs hypotheses. There are Financial Ratios, which use data from the Balance Sheet and the Income Statement, the stock market returns and their volatility, and finally Tobin’s Q, which mixes market values with accounting values. Although maximizing accounting profits and shareholder value are two different things, it is logical to assume that the losses from the agency costs are proportionally close to the losses in the accounting profits that are measured by profit efficiency.

I must note that managers find accounting based measures easier to control than market-based. The reallocation of capital or cash flow, changing the accounting procedures or remaking the expenses, are some of the common actions that accountants use for this purpose. On the other hand, the market value is easily influenced by exogenous economic factors, so it is logical to consider that accounting-based performance measures reflect the manager’s actions. Major accounting scandals and large-scale corporate failures were the main reasons for the growing interest in corporate performance and governance. This particular research is still in the early stages but already there are attempts to create an empirical link between different corporate governance indices such as “Standard & Poor’s Corporate Governance Scores” or “Metrics International” and firm value.

Fama and French (2004) find that new lists with higher profitability tend to have lower delisting rates; my study further establishes the predictability of delisting risk and the relation between firm fundamental and the probability of failure of newly established firms. Recent studies suggest that earnings management is pervasive in the IPO process because of its inherent information asymmetry; Teoh et al., (1998) report that IPOs with aggressive earnings management have poorer long-run earnings management. Recent studies suggest that earnings management is pervasive in the IPO process because of its inherent information asymmetry. Teoh, Welch and Wong, (1998) report that IPOs with aggressive earnings management have poorer long-run earnings management. In this context, Teoh, Welch and Wong (1998) suggest that poor long-run stock performance of IPOs is associated with earnings reversal due to earnings management in the IPO process. Pioneers in bringing up the important role of earnings management in the IPO pricing and marketing, these papers (i.e. Ritter, 1991; Gompers and Lerner, 2003) have not provided a comprehensive content of earnings management in the IPO process nor of its economic determinants.
Research Methodology and design

The availability of the history of IPO firms allows us to observe and track their delisting; I postulate that delisting rate and risk due to performance failure is related to the quality of IPOs. The delisting criteria from stock exchanges are mostly performance related. For example, NYSE sets out three numerical requirements for delisting, minimum distribution requirement (at least 400 shareholders), minimum market capitalization of 15 million dollars and minimum price of one dollar. The other stock exchanges in US (NASDAQ and AMEX) set up similar but less strict requirements. In addition to numerical criteria, the stock exchanges will consider delisting of a company if it fails to meet a number of discretionary criteria; specifically, some of them include: A) if a company’s operating assets have been substantially reduced in size, regardless of the reasons of reduction, B) if the company files for bankruptcy, or C) announces the intention to file

The purpose of this analysis is to deduce whether specific accounting measures can explain the fact of voluntary delisting-squeeze out, involuntary delisting by capital market authorities (for violation of specific categories, or for having certified accountants notes or for consecutive years with losses) or remaining listed. In order to reach valid and reliable results the following corporate governance indicators - accounting measures were used:

A) Capital Market Value, B) capital market value divided by owners equity, C) liabilities divided by total assets, D) company’s age (the years from foundation till IPO), E) current assets divided by current liabilities, F) sales divided by total assets, G) profits divided by owners equity, H) IPO’s income, I) profits divided by sales, J) total assets, K) operating income divided by total assets, L) sales divided by total assets M) sales and N) IPO activity (a binary measure that takes 1 if IPO is on “hot” period years 1999, 2000 and 2001 and 0 if IPO is on other years).

Sample selection

In order for a reliable analysis to be carried out one should take into account all companies and sectors for a big period. For this reason I took all IPOs for years 1996 till 2005 and I exclude companies that were merged.

In the following tables I examine the sample characteristics of the 155 companies that have been inserted in the ASE in 1996 till 2004, A) per year and B) per type

Table 2: Sample characteristics per year

<table>
<thead>
<tr>
<th>Year</th>
<th>96</th>
<th>97</th>
<th>98</th>
<th>99</th>
<th>00</th>
<th>01</th>
<th>02</th>
<th>03</th>
<th>04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies</td>
<td>14</td>
<td>6</td>
<td>20</td>
<td>28</td>
<td>45</td>
<td>12</td>
<td>14</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 3: Companies per type

<table>
<thead>
<tr>
<th>Category</th>
<th>96</th>
<th>97</th>
<th>98</th>
<th>99</th>
<th>00</th>
<th>01</th>
<th>02</th>
<th>03</th>
<th>04</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involuntary delisted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Remaining listed</td>
<td>6</td>
<td>3</td>
<td>8</td>
<td>14</td>
<td>25</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>77</td>
</tr>
<tr>
<td>Squeeze out</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Supervision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Low dispersion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

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I choose year 1996 as starting year because the renewed Hellenic Capital Market Law regarding IPOs was issued that year. This law as well as the privatization of Hellenic Telecommunication Company (OTE in Greek) were the primary factors that lead to the reemergence of the Athens Stock Exchange. In addition, December 2006 is chosen as the ending point, as after that year the ASE faced sufficient stock declines followed by the international economic crisis as well as the Greek debt crisis, which resulted in the reduction of IPOs. From that sample I exclude, following previous literature, financial firms, as well as mergers and acquisitions; the remaining number is 155 firms and includes 26 involuntary delistings and 15 suspended. The data were obtained from HCMC Annual Report and the IPO prospectuses of listed firms.

DEPENDENT Variable (delisting rate). Following previous research, I measure involuntary delisting rate by a dummy variable having a value of “1” if the firm remains delisted within five years survival time, “2” if the company voluntary delisted, “3” if the company was supervises, “4” if the company had low dispersion, “5” if the company was suspended and “0” otherwise.

Binary logit regression model. The determinants of involuntary delisting rate (Pi) are estimated by using the following logit model equation

\[ P_i = a_0 + b_1 \text{AGE} + b_2 \text{SZ} + b_3 \text{MB} + b_4 \text{L} + b_5 \text{CU} + b_6 \text{SA} + b_7 \text{ROE} + b_8 \text{OFSz} + b_9 \text{Prof} + b_{10} \text{TA} + b_{11} \text{OP} + b_{12} \text{SL} + b_{13} \text{ROA} + b_{14} \text{IPO} + b_{15} \text{PE} + b_{16} \text{PB} + e_0 \]

Where

- \text{a_0} is the intercept
- \text{AGE} is the firm’s Age
- \text{SZ} is the log of firm’s Size - market capitalization
- \text{MB} is the Market Value divided by Book Value
- \text{L} is the firm’s Leverage (Total Liabilities divided by Total Assets)
- \text{CU} is the firm’s Current ratio (Current Assets/Current Liabilities)
- \text{SA} is the ratio of Sales divided by total Assets
- \text{ROE} is the firm’s profits divided by book value
- \text{OFSz} is the firm’s Offering Size (IPO proceeds)
- \text{Prof} is the Profits divided by sales
- \text{TA} is the log of firm’s total assets
- \text{OP} is the operating profits divided by total assets
- \text{SL} is the log firm’s sales
- \text{ROA} is the ratio of profits divided by total assets
- \text{IPO} is the IPO Activity (see Table) in the year the firm listed
- \text{PE} is the ratio of profits per share divided by earnings per share
- \text{PB} is the ratio of profits per share divided by book value per share

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4 Financial firms are excluded from the analysis because their financial statements have a special structure and their accounting practices are subject to special regulations (Jaskiewicz et al., 2005; Bhabra and Pettway, 2003; Jain and Martin, 2005; Demers and Joos, 2007; Goot et al., 2009).

5 Merger and acquisition firms were excluded due to the debate with regard to including them in the non-survival group or not (Yung et al., 2008).

6 See for example Charitou et al., 2007; Demers and Joos, 2007; Yung et al., 2008.
is the error term

INDEPENDENT Variables. The following table shows the measurement of independent variables and the expected relationship/sign to involuntary delisting

<table>
<thead>
<tr>
<th>Type of Variable</th>
<th>Measurement of variable</th>
<th>Expected sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (AGE)</td>
<td>Years from incorporation till IPO</td>
<td></td>
</tr>
<tr>
<td>Size (SZ)</td>
<td>Log of market capitalization</td>
<td></td>
</tr>
<tr>
<td>MB</td>
<td>Market value divided by book value</td>
<td></td>
</tr>
<tr>
<td>Leverage (L)</td>
<td>Liabilities divided by Assets</td>
<td></td>
</tr>
<tr>
<td>Current ratio (CU)</td>
<td>Current Assets divided by Current Liabilities</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>Sales divided by Assets</td>
<td></td>
</tr>
<tr>
<td>Return on Equity (ROE)</td>
<td>Profits divided by book value</td>
<td></td>
</tr>
<tr>
<td>OFSz</td>
<td>IPO proceeds</td>
<td></td>
</tr>
<tr>
<td>Profitability (Prof)</td>
<td>Profits divided by Sales</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>Log of Assets</td>
<td></td>
</tr>
<tr>
<td>Operating Profit (OP)</td>
<td>Operating profits divided by Assets</td>
<td></td>
</tr>
<tr>
<td>SL</td>
<td>Log of Sales</td>
<td></td>
</tr>
<tr>
<td>Return on Assets</td>
<td>Profits divided by Assets</td>
<td></td>
</tr>
<tr>
<td>IPO</td>
<td>IPO activity, taking the value of “1” for years 1999, 2000 and “0” otherwise</td>
<td></td>
</tr>
<tr>
<td>Price to Earnings</td>
<td>Share Price divided by earnings per share</td>
<td></td>
</tr>
<tr>
<td>Price to Book</td>
<td>Share Price divided by Book value per share</td>
<td></td>
</tr>
</tbody>
</table>

Reference


