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# What do we know about delistings? A survey of the literature

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## Abstract

Relative to the decision to go public, the decision to delist is less studied in the corporate finance literature despite its importance in the life of the firm. This article surveys the recent literature, both theoretical and empirical, regarding delisting in an international context (Anglo-Saxon countries and Continental Europe). We provide a review of the growing research on delisting based on the distinction between voluntary and involuntary delistings. For voluntary delistings, also called “Going Private Transactions” (GPTs), we analyze the incentives for firms to go private and the financial characteristics of these firms. Next, we focus on involuntary delistings: why do firms undergo a delisting (violation of stock exchange requirements, poor performance) and what strategies did the managers implement to attempt to avoid delisting? Finally, we are interested in the impact of corporate governance on delisting.

**Key Words:** delisting, going private, corporate governance

**JEL classification:** G34

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## 1. Introduction

The corporate finance literature often discusses the decision to go public. The reverse phenomenon – going private – is less studied despite its importance in the life of the firm. If the decision to go public is commonly viewed as a stage in the growth of a company, many questions remain regarding the conditions under which a public firm exits the public market, and the rationale for this move.

During the past decade, delisting has become a common phenomenon in both the US and Europe. In the US, a boom of Leverage Buyouts (LBOs) occurred in the early 1980s. After some high-profile bankruptcies, LBOs then resurfaced in the mid-1990s: according to the SDC (Securities Data Company), the US financial markets have experienced more than 900 delistings since 1996. In Europe, an important wave of delistings via LBOs took place, first appearing in the UK in the 1990s. From 1995 to 2005, more than 25% of European listed firms went private (via LBOs and non-LBOs).

The delisting phenomenon covers heterogeneous transactions. First, we distinguish between involuntary and voluntary delistings<sup>1</sup> (Macey *et al.*, 2008). In the context of an involuntary delisting, the firm undergoes a delisting because it experiences financial distress or has been merged and/or acquired by another firm. In the latter case, the delisting is the pure technical consequence of the M&A and of the change in the shareholder base. In contrast, when a firm decides to go private, this voluntary delisting is referred to as a “Going Private Transaction” (henceforth, a GPT). A GPT is initiated by the existing investors or by new investors who concentrate ownership in their hands and who do not seek to have their equity publicly traded.

Second, a GPT can take different forms according to the country. In the US and the UK, a GPT mostly takes the form of an LBO: the listed company is acquired by private equity investors using substantial borrowing and is then delisted. In most cases, an unlisted company that is specifically set up for the acquisition is created. This transaction, also called a Public-to-Private (PtoP) transaction, is often directed toward companies with a low ownership concentration. Unlike Anglo-Saxon countries, the majority of European firms, especially in Continental Europe, have a large shareholder base (Faccio and Lang, 2002), and the dominant practice for a GPT is a Buy-out Offer with Squeeze-Out (BOSO).<sup>2</sup> A squeeze-out<sup>3</sup> is a transaction in which the controlling shareholders can exercise their legal right to cash out the minority shareholders; this transaction closes the capital of the firm and makes it private. In Europe, the BOSO transaction established by the Thirteenth Directive on Takeovers<sup>4</sup> enables the majority shareholder, under a strictly defined threshold (90% or more of voting rights in France), to force the minority shareholders to sell their shares in exchange for indemnity. Unlike an LBO, the BOSO is initiated by a corporation or family owners and not by private equity investors. In some cases, a BOSO can be initiated by the historic shareholder<sup>5</sup> who strengthens their control to reach the threshold for the squeeze-out. Given the differences between a BOSO and an LBO, the incentives and the driving factors behind these types of GPTs are likely to differ.

Third, the magnitude of the delisting phenomenon is strongly linked with the presence of institutional mechanisms that reinforce corporate governance. External mechanisms such as the implementation of the Sarbanes-Oxley (SOX) Act in the US or the Financial Security Law

(FSL) in France are often cited as a catalyst for the delisting process given the strong costs of compliance imposed by these new regulations. Conversely, efficient firm mechanisms can protect a firm from a delisting. Indeed, firms with weak corporate governance have the incentive to go private to eliminate conflicts between insiders and outsiders

The aim of this paper is threefold. First, we provide a survey of recent theoretical and empirical research on delistings to enrich the empirical knowledge around this phenomenon. Second, we explain why and how the results of the empirical studies might differ across countries and across types of delistings. Finally, we provide suggestions for fruitful avenues of research.

This survey of literature is organized as follows. We first analyze the GPTs: we review both the theoretical incentives for a firm to go private and the empirical studies conducted in the Anglo-Saxon countries and in Europe. The next section focuses on involuntary delistings and synthesizes the managers' strategies to avoid these events. Finally, we examine the impact of both institutional and firm corporate governance on delisting.

## **2. Going Private Transactions (GPTs)**

This section aims to understand the decision to go private. We survey the theoretical incentives for firms to go private (2.1) and the main empirical results (2.2).

### *2.1 Incentives for Delisted Firms*

A well-developed theoretical literature, relied on cost-benefit analysis, explains why firms decide to go public via an IPO (Initial Public Offering). Paradoxically, studies that analyze a GPT as the result of a trade-off between costs and benefits remain scarce. The rationales for GPTs are described in the financial literature beginning in the mid-1980s. The seminal paper of DeAngelo *et al.* (1984) presented the institutional framework of US LBOs and investigated the motivations behind these transactions and their consequences for the minority shareholders. These authors emphasized that a GPT potentially generates gains through a reduction in listing costs and the introduction of an ownership structure that improves the incentives for managers. Bharath and Dittmar (2010) argued that because theories related to the costs and benefits of going public are trade-off type theories, they can also be used to analyze why firms decide to go private. Thus, according to these theories, the decision to go private will depend on the market timing. As analyzed by Martinez and Serve (2011), this decision is made when the listing costs exceed the benefits of staying public, *i.e.*, when one of the following occur: (i) the benefits decrease below the threshold at which the benefits of being public exceed the costs or (ii) the costs increase above the threshold at which costs exceed benefits.

We distinguish between three sets of incentives: traditional motivations, motivations derived from the agency theory and motivations related to financial structure. Contrary to the traditional motivations, which are common to all types of GPTs, the latter two incentives might differ by geographic location and type of delisting.

### 2.1.1 Traditional incentives

Going public sharply increases costs. As a consequence, the first incentive to go private is often to eliminate certain costs that are incurred by the listed firm. The IPO literature suggests that firms receive economic benefits from listing: these benefits include higher liquidity, easier access to financial markets and the possibility of sharing risk with public investors. However, the failure to realize these goals can lead firms to opt out of the public market. In this section, we present the traditional incentives that are common to all GPTs and are related to (i) an increase in listing costs and (ii) a reduction in listing benefits.

The costs incurred by listed firm are both direct and indirect costs. Directs costs contain the ongoing costs following IPOs *i.e.*, costs of registration and underwriting fees, including annual listing fees imposed by exchanges and regulatory bodies and trading costs. Indirect costs contain information production costs (*i.e.*, audit and publication costs related to disclosure), compliance costs to meet regulatory and corporate governance standards, and opportunity costs. Regarding direct costs, DeAngelo *et al.* (1984) and many subsequent studies posited the size hypothesis: as larger firms are potentially more efficient at amortizing these fixed costs, the authors anticipated that small firms would be more motivated to leave the public market when the direct costs of being listed increase. Regarding indirect costs, undervaluation is an example of an opportunity cost that is generated by asymmetric information between managers/owners and stock market investors. Unlike investors, management has superior inside information and knows the true distribution of future returns. Therefore, undervaluation occurs when the market price of the share does not fully reflect the true value of the firm. According to Kim and Lyn (1991), when the management knows that the share price is undervalued, they may decide to go private for strategic reasons, to extract private benefits and to avoid the opportunity costs of staying listed.

A reduction in listing benefits can occur when the financial visibility deteriorates. Financial visibility is defined by Mehran and Peristiani (2009) as a measure for asymmetric information: it is the ability of a firm to attract an adequate level of investor interest and recognition (analyst coverage). Thus, the intermediate role played by securities analysts can affect a firm in a number of ways (*e.g.*, liquidity and monitoring). As a consequence, a negative relationship is assumed between the degree of financial visibility and the decision to go private. Another way to assess investor interest is to examine the liquidity of the stock and the related trading costs. As demonstrated by many studies and models (*e.g.*, Amihud and Mendelson, 1998; Bolton and Von Thadden, 1998; Boot *et al.*, 2006), the liquidity of share trading is a primary benefit of going public. As a consequence, if the stocks' liquidity benefit deteriorates, the firm will be more likely to go private.

Finally, the ability to share risk with public investors is also a primary benefit derived from being a public firm. Shah and Thakor (1988) showed that when a controlling shareholder has superior information about the return distribution of a firm's assets, public status is appealing because it allows the risk to be shared more efficiently with the public investors (investors eliminate idiosyncratic risk by maintaining well-diversified portfolios). Conversely, a firm can go private when the idiosyncratic risk is low and public status no longer provides a risk-sharing advantage.

### 2.1.2 Incentives derived from agency theory

In Anglo-Saxon countries, the dominant form of the GPT is the LBO, which is often directed toward companies with a low ownership concentration. In this case, the primary motivation to go private is related to agency theory: an LBO is viewed as a tool to reduce the conflicts of interest between managers and shareholders. The central dilemma of how to get the manager to act in the best interest of the shareholders (Jensen, 1986) provides two possible explanations for a GPT via an LBO. One explanation is given by the *incentive realignment hypothesis*: the need to realign the incentives of the managers with those of the shareholders is mentioned by Kaplan (1989a, 1989b) as an important factor in the delisting decision. A GPT allows for the reunification of ownership and control because a firm with diffused capital is acquired by only a few investors. As a consequence, the gains in the shareholders' wealth that arises from a GPT provide rewards for the managers and induce them to act consistently with the interests of investors. Another explanation is given by the *Free Cash Flow (FCF)<sup>6</sup> hypothesis*. The high leverage associated with an LBO is supposed to reduce the waste of FCFs by the managers because more cash-flow is needed to repay the debt.

In Continental Europe, corporate governance differs from governance in Anglo-Saxon countries because the ownership structure is more concentrated. The largest shareholder's stake is approximately twice as large as that in Anglo-Saxon LBO targets (Faccio and Lang, 2002). As highlighted by Weir *et al.* (2005) and Renneboog *et al.* (2007), the presence of a stronger concentration of ownership implies closer monitoring by outside shareholders prior to the GPT. Thus, the firm is less likely to suffer from high agency costs stemming from conflicts of interest between shareholders and managers. Consequently, if the realignment hypothesis is considered to be an explanation for European GPTs, realignment is not as strong a driving factor as it is in the Anglo-Saxon markets. A complementary dimension is developed by Achleitner *et al.* (2010), who analyzed the role of private equity transactions in Continental Europe. A firm's attractiveness for private equity investors depends on the quality of the monitoring by the large shareholder: a highly monitored firm is likely to be less attractive to private equity investors because the potential for value creation will be lower. Furthermore, the large shareholder is likely to extract private benefits of control. Conversely, in a lowly monitored firm, the large shareholder will be more tempted to sell the firm via an LBO. As a consequence, the *control hypothesis* is proposed as an alternative hypothesis for European GPTs via an LBO. This hypothesis posits an inverse relationship between the shareholder's wealth gains from GPTs and the ownership concentration.

Finally, for GPTs located in Continental Europe, the conflicts of interest are concentrated between large and minority shareholders (Crocchi and Del Giudice, 2011): large shareholders might be tempted to extract private benefits of control and minority investors are not in a strong bargaining position. In the case of a GPT via a BOSO, the controlling shareholder holds 90% or more of the voting rights at the time of the BOSO because it has already strengthened its control before initiating the procedure. Thus, agency conflicts between managers and owners become of secondary importance, and conflicts between large and minority shareholders take center stage. Martinez and Serve (2011) posited that the incentives of the controlling shareholder for delisting the firm can differ according to its identity. In

particular, family owners exert uncontested control and aim to maximize their benefits, which often include private benefits that are not available to minority investors. Moreover, families are often risk-averse and will choose to exit the public market when facing threats to their control, as can be the case for smaller and undervalued firms, which are ideal acquisition targets. In this situation, family controlling shareholders may decide to close the capital of their firm to avoid a contest with minority shareholders who could sell their shares to a new owner, such as an institutional investor.

### *2.1.3 Incentives related to financial structure*

Contrary to the GPTs via a BOSO, a vast majority of the GPTs via an LBO occur with a substantial increase in leverage, sometimes with junk debt. Consequently, the hypotheses related to the financial structure of the delisted firm will differ strongly according to the type of GPT. First, the tax benefit is presented in many studies as a key driving factor in the decision to go private via an LBO. Lehn and Poulsen (1989) and subsequent studies note that tax benefits are an important source of wealth gains in the US market because interest payments on corporate debt are tax deductible. The substantial increase in cash-flows creates a major tax shield and, after the transaction, firms pay almost no tax for a long period, which increases the shareholders' gains. However, as noted by Renneboog *et al.* (2007), the magnitude of this tax benefit depends on the fiscal regime and the marginal tax rate the firm is subjected to. Second, an LBO generates a wealth transfer from bondholders to shareholders of the target firm due to high leverage: bondholders will protect themselves from this potential expropriation by including covenants in their debt contracts.

Tax benefits cannot be a driving factor for a GPT via a BOSO because this transaction does not require any financial leverage. However, debt considerations are not set aside from the decision to go private: if the firm no longer needs access to the equity market and is not financially constrained, the decision to go private could reveal its preference for alternative sources of financing such as debt, given that there are fewer benefits – and many costs – associated with being listed (Bharath and Dittmar, 2010; Martinez and Serve, 2011). Furthermore, if the firm no longer needs access to the equity market, another motivation for a GPT could be a lack of growth opportunities and investment projects (Kim and Lyn, 1991; Bharath and Dittmar, 2010; Martinez and Serve, 2011).

Finally, a performance problem associated with high costs from financial distress is another possible incentive for a firm to go private. Weir *et al.* (2005) successfully tested the financial distress costs model of Opler and Titman (1993) on the UK market: this model argues that the decision to go private is a tradeoff between the potential gains from incentive realignment and the possible costs of financial distress.

## 2.2. Empirical Results

Because the type of GPTs and the driving factors of the delisting decision can differ according to the geographical location, the empirical results are presented first for the US and the UK markets and second for Continental Europe.

A large empirical literature focuses on the driving factors behind LBO delisting in the US. Kaplan (1989b) first highlighted the tax benefit as a major source of value for 76 Management Buy Outs (MBOs)<sup>7</sup> from 1980 to 1986. The median value of this benefit varied from 21% to 142% of the premium paid to the pre-buyout shareholders. Lehn and Poulsen (1989) and Kim and Lyn (1991) investigated other sources of wealth in LBOs that were related to the reduction of agency problems. Using a sample of 263 LBOs from 1980 to 1987, Lehn and Poulsen (1989) found that the likelihood of being taken private is directly related to the fraction of undistributed cash flows. These results were more significant for firms with less concentrated ownership. Kim and Lyn (1991) also validated the FCF hypothesis on a sample of 53 firms that went private via LBOs between 1976 and 1984. In addition, these authors examined the financial characteristics of the LBO firms: all of these firms were undervalued and exhibited a decline in public equity financing. Moreover, they were concentrated in industries with stable cash flows and were smaller than public firms.

Mehran and Peristiani (2009) focused on two other important incentives behind the decision to go private: liquidity and financial visibility. The authors studied a sample of 218 US firms that were delisted via an LBO between 1990 and 2007. They used proxies for analyst coverage such as the growth in the number of analysts and the change of institutional ownership (institutional investors prefer to invest in firms that have a sizable analyst following, *e.g.*, see O'Brien and Bhushan, 1990; Falkenstein, 1996). Their results suggested that firms with decreases in analyst coverage, institutional ownership and turnover (*i.e.*, volume of transactions) were more likely to go private.

Bharath and Dittmar (2010) documented the importance of the trade-off theory as a significant explanation for the decision to go private. In contrast to previous studies, these authors examined US firms from their IPOs to their delisting over the 1980 to 2004 period (1081 firm-years) and compared these firms to a sample of firms that went public and remained public (6640 firm-years). First, their results confirmed the strong roles played by FCF, liquidity and financial visibility, as emphasized in previous studies. Second, they found support for the importance of the ownership structure and information in the delisting decision. More precisely, they found that firms going private by LBO had lower institutional ownership, more concentrated ownership and more informed trading at the time of the IPO than did public firms.

Weir *et al.* (2005) and Renneboog *et al.* (2007) analyzed the sources of shareholder benefits for PtoP transactions in the specific context of the UK. From 1998 to 2001, Weir *et al.* (2005) investigated the driving factors of the delisting decision by comparing the characteristics of 117 LBO firms with those of a random sample of 362 public companies. The authors revealed that, in comparison to firms that remained public, the delisted firms were smaller, younger, more diversified and had lower growth opportunities as measured by the Q ratios.<sup>8</sup> Renneboog *et al.* (2007) found that the main sources of shareholder wealth gains are undervaluation of the pre-transaction target firm, increased interest tax shields and

incentive realignment for 177 UK GPTs from 1997 until 2003. These studies performed by Weir *et al.* (2005) and Renneboog *et al.* (2007) indicated two important differences from the US studies. First, the authors found weak evidence for the FCF hypothesis. Second, the tax advantages for financing firms with debt appeared to be smaller in the UK market. According to Weir *et al.* (2005), this difference could occur because the tax advantages of financing firms through debt instead of equity are more applicable to the US than to the UK.

In Continental Europe, several empirical studies have focused on the motivations behind LBOs, and the primary findings were similar to the previously mentioned UK studies. Wright *et al.* (2006) suggested that undervaluation is the major source of wealth gain in the LBOs in Continental Europe. Thomsen and Vinten (2007) examined every type of delisting, including those that occurred via an LBO, followed mergers and acquisitions (M&As), were triggered by financial distress or were the result of other going-private deals. They analyzed the determinants of 3577 delistings among 12612 European companies from 21 different countries between 1995 and 2005. Their study indicated that the delisted firms were slow-growing, undervalued and relatively illiquid. More recently, Boucly *et al.* (2009) studied 830 French firms that delisted via an LBO in 1994-2004. By matching the LBO firms with a control group of firms that belong to the same business sector but remained independent, they found that smaller and undervalued firms were the most likely targets for LBOs and that LBOs have a positive impact on both the pre and post operating performance of the target.

More specifically, two studies are dedicated to the impact of ownership structure on European GPTs. Achleitner *et al.* (2010) investigated how ownership structure affects the decision to go private via an LBO on a sample composed of 1295 companies over the 1997-2007 period. Their results supported both the tax-benefit advantage and the disciplinary role of leverage as strong driving factors behind LBOs. Croci and Del Giudice (2011) also investigated how ownership structure affects the GPTs for both LBO and non-LBO transactions. Using data from 882 transactions, they examined the market reaction around the delisting announcement and the post-delisting performance of the firms. They found that the Cumulative Abnormal Returns (CARs) around the announcement were negatively related to the degree of ownership concentration, consistent with agency theory. Moreover, their results confirmed the undervaluation hypothesis. Finally, they found that the post-operating performance of family firms was better than that of firms that were delisted by new owners.

In Continental Europe, the vast majority of delistings are carried out via a BOSO; this type of GPT has remained unexplored in the literature. The first study of Martinez and Serve (2011) focused on the French voluntary delistings via a BOSO over the 1997–2006 period. The authors exploited the specificity of transactions that are initiated by the historic controlling shareholders. Their sample contained 70 firms voluntarily delisted via a BOSO and 70 industry-matched control listed firms. Their results supported the traditional incentives derived from the cost-benefit analysis: when the listing benefits decrease because of weak liquidity and/or weak analyst coverage, it seems better for the firm to go private. Furthermore, the inherent characteristics of delisted firms (*i.e.*, performance, leverage, and risk as measured by the beta factor) appeared to be important driving factors for delisting. Finally, the study shows that the driving factors of delisting differ according to the controlling shareholder's identity. More specifically, the level of risk appeared to be the strongest determinant for family firms, while non-family firms also considered their own financial structure.

In this section, we identified different incentives for a firm to go private according to the type of transaction (LBO vs. BOSO) and its location (US, UK, Continental Europe). These incentives are consistent with situations in which delisting is voluntarily chosen by the managers. However, there are other situations in which delisting is undergone by the firm. The following section examines these involuntary delistings.

### **3. Involuntary Delistings**

A vast majority of the empirical studies on involuntary delisting focuses on the US market. The aim of these studies is threefold: understanding the reasons for the involuntary delisting (3.1), analyzing the managers' strategies to avoid the delisting (3.2), and determining the impact of the delisting on the investor's wealth (3.3).

#### *3.1 Reasons for Delisting*

Firms are involuntary delisted for two primary reasons: violation of stock exchange requirements and/or poor firm performance.

Several studies analyzed the effects of non-observance of the market rules on involuntary delisting in terms of its effectiveness regarding both the good performance of the exchange and the protection of the investors. The criteria for delisting by the American stock exchanges are very strict and well detailed.<sup>9</sup> By studying delisted firms from the NYSE (New York Stock Exchange) or the AMEX (American Stock Exchange), Sanger and Peterson (1990) noted that most delistings resulted from a failure to meet numerical standards such as the minimum net income, the minimum number of shareholders, or the minimum market value for shares outstanding. For these authors, in addition to the numerical criteria, the stock exchange could also consider additional factors such as failure in accounting practices or the perpetuation of conflicts of interests with creditors.

Even if the listing criteria are clearly formalized, the control created through the US market regulators is greatly flexible and gives companies with financial troubles a chance to rectify their difficulties. Chen and Schoderbek (1999) analyzed the involuntary delisting process using a sample of 150 AMEX delisted firms between 1981 and 1992. By focusing on the accounting information, they noted that 45.7% of the delisted firms did not violate the accounting standards before their delisting, whereas 31% had violated these directives on several occasions during the five years before the delisting. Only 21.7% of the firms were delisted during the year following their first violation of the accounting standards. Chen and Schoderbek (1999) suggested that AMEX does not base its delisting decision on the strict observation of the market rules or financial directives because some firms can violate these directives without being delisted. Thus, others factors are taken into account in the delisting process: (i) the opening of a bankruptcy procedure and/or the lawsuits engaged by shareholders; (ii) the volume of exchange and/or the stock returns; and (iii) the auditors' opinion. One explanation for these results is the cost of the investigation generated by detecting a violation: the market regulator could be reluctant to incur these costs. In addition, the authors recognized that it is difficult to obtain complete and exact information on the means

mobilized by AMEX to make its delisting decision. Finally, accounting and financial information disclosed by the company likely to be delisted is taken into account by financial analysts and incorporated in the stock's returns. In addition, Chen and Schoderbek (1999) showed the utility of the opinions of the auditors who examine accounting and financial reporting. These opinions are used by AMEX to justify their delisting decisions.

More recently, Serrano (2010) compared the enforcement of the delisting rules in two different markets: the NYSE and the Toronto Stock Exchange (TSX). In the NYSE, delisting is a self-regulated process, whereas the external regulator participates in the decision in the TSX. The author posited that the self-regulation of the NYSE amplifies the underlying conflicts of interest in the case of delisting: he expected more expensive consequences for the investors in firms delisted from the NYSE than for those investing in firms delisted from the TSX. According to Serrano (2010), self-regulated exchanges create a suboptimal trading environment due to contradictions in the enforcement of the financial market standards. In contrast, on the TSX, the external regulators have less flexibility in applying the rules. Thus, firms in the NYSE should have larger effective spreads than those in the TSX. These negative effects should be amplified after 2006 when the NYSE became a listed company. Serrano (2010) confirmed those assumptions using a sample of 198 firms delisted from the NYSE and 39 firms delisted from the TSX between 2002 and 2009.

In addition to the violation of rules, the second reason for involuntary delisting is linked to poor operating and financial performance. Several empirical studies assessed the probability of aftermarket survival for IPO firms. For example, Seguin and Smoller (1997) examined the mortality of newly listed NASDAQ (National Association of Securities Dealers Automated Quotations) stocks. Based on a sample of 5896 delisted firms from 1974 to 1988, they distinguished between two primary determinants for the mortality of firms: market capitalization and stock price. Empirical results showed that mortality is related to the stock price: the death rate is higher for stocks with lower prices. After controlling for price, the authors concluded that market capitalization has additional explanatory power.

Baker and Kennedy (2002) studied the stock returns before the delisting to understand why and how the firms died. They found a high disappearance rate for listed companies on the NYSE and AMEX (both at 40% over 10 years). In addition, their results showed that firms lost a significant fraction of their value during the period from 10 years to 1 year before delisting. Two studies examined the aftermarket survival (Fama and French, 2004; Peristiani and Hong, 2004). Fama and French (2004) analyzed how the changing characteristics of new IPO firms in the US between 1980 and 2001 affected whether they survived, disappeared in mergers, or were delisted. These authors showed the importance of the firms' deteriorating performance in the delisting: more than two out of every five of the new IPO firms are delisted within 10 years for poor performance. The findings of Peristiani and Hong (2004) were consistent with the assumption that the pre-IPO performance affects the survival probability. Firms with negative pre-IPO earnings were three times more likely to be delisted than were issuing companies that were profitable. The authors used a sample of US IPO companies from 1980 to 2000, and they found that the rate of delisting for the newly listed firms increases four or five years after going public.

As involuntary delisting is a threat for many firms, managers should strongly consider implementing strategies to avoid it.

### 3.2 Managers' Strategies to Avoid Delisting

Involuntary delistings are likely to have a strong impact on the managers' *hubris*.<sup>11</sup> In addition, managers can be subject to high costs (stock exchange penalties, reputation, revocation...). Thus, to avoid the negative effects of a delisting, managers should have incentives to implement strategies to avoid the delisting. One strategy that is well described in the financial literature is to manage earnings to hide the financial difficulties of the firm. According to Healy and Wahlen (1999, p. 368), “*earning management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.*”

Yang (2006) studied the reactions of firms facing the threat of involuntary delisting. He considered the minimum listing requirements imposed by the regulator on the firms and he examined the reactions of the firms that were risking involuntary delisting by violating these criteria. To reduce this risk, the managers of these firms have incentives to amplify the stock price. Yang (2006) focused on two possible actions: earnings management via *accruals*<sup>12</sup> and the attribution of bonus shares. These practices are examined using a sample of 812 firms that were in financial distress and on the American stock exchanges (NYSE, AMEX, and NASDAQ) over the 1992–2002 period. The empirical results showed that the firms at risk of being delisted increased their earnings to stage a fall of the stock exchange price and allotted bonus shares to amplify the impact on the share prices. In addition, earnings management is statistically more significant in the group of firms that do not distribute bonus shares. Finally, Yang (2006) found that the earnings management of the firms most likely to be delisted is associated with high production of information costs and weak share liquidity.

While the study of Yang (2006) considered earnings management as a tool to avoid delisting, Li *et al.* (2006) focused on earnings management at the time of the IPO to estimate the *ex-ante* delisting risk of the newly listed firms. They assumed that the magnitude of earnings management at the IPO is conversely associated with the quality of the firm and that this quality is conversely associated with the delisting risk. They tested their assumption on a sample of 3898 firms listed on the AMEX from 1980 to 1999. Their results showed that the need to meet the requirements of an IPO involved aggressive earnings management. Moreover, the magnitude of earnings management is related to the delisting risk after the IPO: IPO firms with aggressive earnings management are more likely to delist for performance failure and tend to delist sooner. The authors also showed that earnings management is not related to the age, growth or level of invested capital for the firms.

Finally, delistings can involve high costs for the firm shareholders. Some studies tried to measure the impact of these costs on the shareholders' wealth on the post-delisting period.

### 3.3 Post-delisting Performance and Its Impact on Investors' Wealth

The death of firms is central to the creation/destruction process in a capitalist economy and to the investors' wealth. According to Baker and Kennedy (2002), without the economic grim reaper, productive resources (physical, intangible, and human) would be less likely to move to higher-valued uses or into the hands of better managers. Economic development depends on innovation and the reallocation of productive resources. While some firms are able to reconfigure their assets and strategies to adjust to changing technology and tastes, many are not. This inability to reconfigure could be the case for delisted firms. Thus, an involuntary delisting could be due to a fall in the stock price and/or in the productive activity of a firm. Consequently, delisting has a negative effect on the investors' wealth insofar as this decision involves a dilution of share prices after the exit from the stock exchange (Baker and Kennedy, 2002).

Using a sample of 520 US delisted firms over the 1962–1985 period, Sanger and Peterson (1990) showed that the firms' values are negatively impacted when their stock is delisted from NYSE or AMEX. This loss of value could be caused by the decrease in liquidity that accompanies delisting. Another explanation for the decline in firm value is the negative signal about the firm's quality and future prospects sent by the exchange's decision to delist the firm. Moreover, Sanger *et al.* (1990) showed that, for firms with prior delisting announcements, the market responds on the announcement day, whereas for firms with no advance public warning of delisting, the market adjustment occurs over the subsequent non-trading interval.

Angel *et al.* (2004) confirmed that an involuntary delisting is associated with a significant loss of shareholder wealth. They analyzed a sample of 1098 firms delisted from the NASDAQ between 1999 and 2002 and considered a period of six months around the involuntary delisting date (three months before and after). They used different proxies (effective spreads, quoted spreads, volume of exchange and volatility) to measure liquidity and found that involuntary delisting is associated with a large decline in liquidity: volume declines by two-thirds; quoted spreads almost triple from 12.1% to 33.6%; effective spreads triple from 3.3% to 9.9%; and volatility more than triples from 4.4% to 14.3%. Those results are confirmed by Serrano (2010), who observed a significant reduction in trading volume, share price and volatility both in the NYSE and in the TSX. He concluded that in a self-regulated market, the investors suffer from a contradictory application of delisting rules. Marosi and Massoud (2007) found the same results as Angel *et al.* (2004). They observed a negative impact from the involuntary delisting on the shareholders' wealth, with the average abnormal cumulative return sharply dropping (approximately -12%) on the delisting day.

In summary, this literature review shows that involuntary delisting has important economic effects for both managers and shareholders of the firms. The literature suggests that conflicts of interest and the quality of the corporate governance are also likely to impact delistings. In the following section, we examine the link between corporate governance and delisting.

## 4. Delisting and Corporate Governance

The impact of corporate governance on the decision to go private is twofold. First, the choice to go private is viewed as a consequence of the strengthening of the corporate governance regulation. The general international increase in the corporate governance rules is associated with higher costs for compliance. In this context and following a trade-off framework, some companies could prefer to leave the exchange market if the costs of the new regulations exceed the benefits associated with being listed (4.1). Second, the decision to go private aims to reduce the agency costs related to free cash-flows. This agency explanation predicts that firms with weaker corporate governance mechanisms are more likely to be delisted (4.2).

### 4.1 *The Impact of Corporate Governance Regulation*

Recent years have produced a wave of corporate governance regulation in the US and Europe. This international movement has raised the costs of compliance, which include auditing costs and disclosure costs. The increasing costs of compliance might exceed the benefits of being listed and, as a consequence, many managers could decide to make their firms private.

A well-developed strand of the literature focuses on the effects of corporate governance regulation on delistings. More specifically, the 2002 adoption in the US of the Sarbanes-Oxley (SOX) Act is frequently cited as a driving factor for the decision to go private. This act introduced new disclosure rules and auditing standards and added criminal penalties for governance fraud. For example, it is henceforth necessary for public companies to establish an internal control system for financial reporting. In addition, the CEOs (Chief Executive Officers) and CFOs (Chief Financial Officers) are both required to certify the firms' financial reports. As a consequence, the passage of SOX has substantially increased the auditing costs and the required internal resources necessary to comply with the SEC reporting requirements.<sup>13</sup>

Marosi and Massoud (2007) and Leuz *et al.* (2008) investigated the impact of SOX on SEC deregistrations.<sup>14</sup> Marosi and Massoud (2007) studied a sample of 261 deregistered US firms between 1996 and 2004. By comparing the pre- and post-SOX periods, they found that the number of firms deregistering grew dramatically after the adoption of the law (with 101 firms deregistering in 2003 compared to 44 in 2002). Their results are consistent with the assumption that the direct costs of regulatory compliance are a major driving factor for delisting. The impact of SOX on the deregistration decision is confirmed by Leuz *et al.* (2008). By studying a sample of 480 deregistered firms from 1998 to 2004, they found that the smaller firms with poor performance and low growth opportunities, for which the costs of compliance are particularly burdensome, are more likely to go dark. The size hypothesis is also tested by Becker and Pollet (2008): because many of the costs imposed by SOX are independent of firm size, the influence of SOX on the GP decision should be strongest for small firms. The authors validated this hypothesis with a sample of US delisted companies from 1981 to 2006.

Another article by Engel *et al.* (2007) studied the effects of SOX on 237 firms that decided to go private between 1998 and 2005. The authors expected that the net benefits of being public after the passage of SOX would be smaller for smaller firms that have thin trading volume and low financing needs. They investigated firms' decisions to go private around the time of SOX and the market reactions to these decisions. Engel *et al.* (2007) found two primary results. First, the SOX-related costs were higher for smaller and less liquid firms. Second, positive stock returns have been observed around the going-private announcements. According to Engel *et al.* (2007), this positive reaction is due to the net SOX costs that firms avoided by going private. The authors developed another important idea: going private is not the only way that firms attempt to avoid the increasing compliance costs. The alternative means include mergers, particularly if SOX-related costs are subject to scale economies, or divestitures.

According to Leuz (2007) and Bartlett (2009), the effects of SOX on firms are unclear. Leuz (2007) proposed an alternative explanation regarding the influence of SOX. On one hand, the adoption of SOX increased the costs of compliance; on the other hand, there is evidence that SOX produced some benefits by increasing the amount of scrutiny leveled on firms, as the policymakers intended. To better understand the relationship between SOX-related costs and the decision to go private, Bartlett (2009) focused on firms going private that finance the transaction with high-yield debt. In this case, the firms remain subject to most of the requirements of SOX. According to this author, if the regulatory costs of SOX are the primary reason for going private, then a general decline in the rate at which publicly traded targets elect to remain Exchange Act reporting companies after their acquisition should be observed after 2002. He found that the wave of GPT via an LBO occurring in the US during 2003-2006 continued to use high-yield debt and concluded that this wave was not driven by the costs of SOX.

In Europe, the impact of corporate governance regulation has been studied by Thomson *et al.* (2007) and Martinez and Serve (2011). Thomson *et al.* (2007) used the minority investor protection index developed by La Porta *et al.* (1998) as a measure for corporate governance regulation. They found that stronger minority investor protection and the adoption of corporate governance codes are associated with a higher delisting frequency by both M&As and other GPTs, but reduce the probability of bankruptcy and liquidation. On the French market, Martinez and Serve (2011) examined the impact of the Financial Security Law (FSL) enacted in 2003 on the delisting decision via a BOSO. Similar to the SOX Act in the US, the FSL strengthens the legal provisions related to corporate governance.<sup>15</sup> The study covers 1997-2006, and the sample contains French voluntarily delisted companies. Martinez and Serve (2011) showed that the determinants of the delisting decision changed after the adoption of the FSL. Firm size, operating margin and market-to-book ratio played significant roles in the delisting decision after the FSL. The delisted firms are small, undervalued and poor performers; thus, they can no longer afford the public status given the increased costs of reporting and governance after the passage of the FSL. The authors concluded that the cost-savings rationale plays an important role into the decision to go private.

However, the cost savings rationale may not be the only motivation for delisting (Leuz *et al.*, 2008). Agency problems and insiders' interest can also play a role in the delisting decision: the private statute can mitigate managerial opportunism and conflicts between

shareholders and managers. In this situation, delisting is viewed as a response to the ineffectiveness of a firm's corporate governance mechanisms.

#### *4.2 Corporate Governance Mechanisms for Firms*

The GPT would be expected to mitigate any agency problems associated with weak internal governance. Thus, the ineffectiveness of a firm's corporate governance mechanisms should increase the likelihood of its being delisted. Weir *et al.* (2005) analyzed the governance characteristics of 95 UK P-to-P targets during the 1998-2000 period and compared them with the characteristics of companies that remained public. Their results showed significant differences between the two groups: delisted firms had higher CEO (Chief Executive Officer) ownership and higher institutional ownership, more duality<sup>16</sup> and lower Q ratios. Another study performed by Charitou *et al.* (2007) examined the impact of the governance structure on a firm's ability to survive in the NYSE. They used a sample of 161 companies that were involuntarily delisted between 1998 and 2004 and a control sample of 161 industry- and size-matched firms. The governance structure was measured by the independence of the directors, the board size, the board activity (number of meetings) and the insider ownership. The authors found evidence that firms with more outside directors and higher insider ownership are less likely to be delisted, and they concluded that governance characteristics are associated with the likelihood of delisting. More recently, Becker and Pollet (2008) focused on two measures of corporate governance: a governance index as a proxy of shareholder rights and an entrenchment index including anti-takeover provisions and provisions that impede a majority shareholder from imposing decisions on management. Their results suggest that managerial entrenchment reduces the likelihood of going private. Thus, managers of public firms appear to have better access to private benefits than do managers of private firms. However, Becker and Pollet (2008) found no statistically significant impact for the governance index. They explained this weak result as a consequence of the construction of the index (the inclusion of variables such as director compensation and secret ballots that could have no influence on the decision to go private).

By studying deregistrations, Leuz *et al.* (2008) tested the effects of both SOX and weak outside monitoring. The impact of monitoring has already been shown by Marosi and Massoud (2007), who found that firms going dark have greater insider ownership and lower institutional ownership. To investigate the relevance of governance and outside monitoring, Leuz *et al.* (2008) used different proxies: the number (or percentage) of independent directors, a distinct CEO and chairman, and the presence of institutional shareholders. They found that deregistered firms have weaker board governance and outside monitoring. These firms also have, on average, larger accruals (consistent with poorer accounting quality) and a larger problem with free cash-flows. In summary, US studies showed that delisting can mitigate agency problems and managerial opportunism.

In Continental Europe, the corporate governance system differs from that in the US because many European firms have a controlling shareholder. The impact of ownership on the GPT has been studied by Achleitner *et al.* (2010) and Croci and Del Giudice (2011). Achleitner *et al.* (2010) argue that it is important to take ownership (defined by the authors as the ownership of cash-flow rights) and control (defined as ownership of voting rights) into

account when studying the motivation of private equity investors operating in Continental Europe. The final sample contained 115 firms in Continental Europe that had been taken private by private equity investors between January 1997 and July 2007. The authors found evidence that the likelihood of a firm becoming the target of private equity investors is influenced by the monitoring incentives and the private benefits of control enjoyed by the incumbent large shareholder. However, this pattern only emerged for family-controlled firms. Croci and Del Giudice (2011) exploited the presence of family control in European companies to study the role of agency conflicts between large shareholders (families) and minority investors in the decision to go private. Using data from 882 European GPT, Croci and Del Giudice (2011) examined both the market reaction around the announcement and the firm's post-delisting performance. Their results support the agency theory predictions: the market reaction around the going-private announcement is negatively related to the degree of ownership concentration. In addition, they found that firms taken private by new owners experience worse operating performance compared to firms taken private by the largest family shareholders.

To summarize, the influence of corporate governance on the decision to go private is twofold. On one hand, the strengthening of corporate governance standards increases the costs of compliance and makes public status less attractive. In this case, delisting is a consequence of corporate governance overregulation. On the other hand, delisted firms are characterized by weaker corporate governance mechanisms. Thus, delisting is viewed as a response that reduces conflicts between insiders and outside shareholders and managerial opportunism.

## **5. Conclusion**

The aim of this survey was to better understand the delisting phenomenon, which remains unexplored in the international context. More specifically, this survey provided the first detailed comparison of delistings between Anglo-Saxon markets and Continental Europe by presenting recent empirical research. An increasing number of public firms go private, but the transactions remain heterogeneous regarding their form and nature. Two main questions were addressed: why do some firms decide to go private? Why do other firms undergo delisting? We surveyed three strands of literature. The first strand was interested in going-private transactions via an LBO (US and UK) and a BOSO (Continental Europe) and aimed to provide reasons for these transactions and to identify the determinants of delisting. A second strand of the literature wondered why and how involuntary delisting occurs: firms are delisted because of violations of the stock exchange requirements and/or because of poor performance. A third trend of research focused on the link between delisting and corporate governance both for voluntary and involuntary delistings.

This survey provided several interesting insights into the research topic of delistings. First, the incentives for Going Private Transactions can be explained using a cost-benefit analysis. In Anglo-Saxon countries and in Continental Europe, the delisting decision results from a trade-off between listing costs and benefits. Second, the magnitude of the costs and benefits is influenced by both institutional aspects (minimum requirements, corporate governance regulation) and the firm's ownership structure. Third, it appeared that in many

cases of delisting (voluntary or not), firms experienced trouble in performance prior to the delisting.

In the light of this survey, we propose three research avenues. First, considering the lack of empirical evidence on involuntary delisting in Europe – the majority of work focuses on the US – an interesting future research avenue would be to compare the characteristics of European involuntarily delisted firms and the reasons for these delistings with those of the US firms, in the light of different institutional frameworks. Second, previous studies highlighted the existence of managers' strategies to avoid involuntary delisting, particularly via positive earnings management. Thus, another research avenue could be to study the use of earnings management to prepare voluntary delistings. In contrast to the positive earnings management engaged in to reduce the delisting risk, managers that want to delist their firm could be tempted to decrease earnings to minimize the firm's value and the cost of the delisting. Finally, we are left with an interesting issue: a recurrent driving factor of delistings appears to be poor performance, which is quite natural for a delisted firm in financial distress but more questionable for a going-private transaction. We wonder if the primary reason for a GPT could be a response to upcoming financial difficulties. A last promising avenue for future research on delisting might focus on an in-depth comparison between voluntary and involuntary delistings.

## Notes

1. This paper focuses on delistings that definitely close the capital of the firm. As a consequence, delistings of cross listed firms, *i.e.*, firms that are listed on one or more foreign stock exchanges in addition to their domestic exchange, are not considered.
2. For instance, in France, 300 firms went private following a BOSO while only 50 firms experienced a public-to-private LBO transaction over the 1997-2006 period.
3. As discussed by Ventrone (2010), the term "squeeze-out" does not have a case law definition and can be used interchangeably with the term "freeze-out."
4. European Directive 2004/25/EC on Takeover Bids.
5. In contrast with newcomers, historic shareholders have been controlling shareholders of the firm for several years before the delisting.
6. FCF is the cash flow in excess of that required to finance all projects with a positive net present value (NPV).
7. A management buyout (MBO) is a specific form of LBO where the incumbent management team delists its firm (frequently backed by private equity investors).
8. The Q ratio is defined as the ratio of a firm's market value of equity plus total debt minus cash in the balance sheet to the book value of assets.
9. For instance, for the New York Stock Exchange (NYSE), the criteria are the following: (i) the absence of regular disclosure of income; (ii) the average benefit in the three last year's is less than \$600,000 per year; (iii) a low share price or an overly reduced volume of transactions; (iv) net assets or market capitalization that are less than 8 million dollars; (v) the number of shareholder holdings is at least 100 stocks less than 1200; (vi) an absence of assemblies and the refusal to request votes by getting proxies.

10. NASDAQ: National Association of Securities Dealers Automated Quotations.
11. Hubris (an ancient Greek word) means extreme haughtiness, pride or arrogance. Hubris often indicates a loss of contact with reality and an overestimation of one's own competence or capabilities, especially when the person exhibiting it is in a position of power such as the firm's managers.
12. An accrual is a charge/revenue incurred/generated in one accounting period but that has not been paid/perceived in cash by the end of it. Accruals are usually used to measure earnings management.
13. Eldridge and Kealey (2005) found that the average increase in audit fees from 2003 to 2004 was 67% among Fortune 1000 companies.
14. In the case of deregistrations, public companies go dark, *i.e.*, delist from the SEC but continue to trade in the OTC market.
15. In particular, the annual report contains an internal control report stating that it is the responsibility of the management to establish and maintain adequate internal control structures and financial reporting procedures.
16. The duality represents the situation in which the same person holds the posts of CEO and chairman.

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