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Boissin, Romain

ESG management school

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## **Are financial analysts of IPO firms under pressure: the European evidence.**

Romain Boissin: Associate professor, ESG Management School, Paris, France Metropolitan

CONTACT: Romain Boissin, ESG Management School, 25 rue Saint Ambroise, 75011 Paris, France, Metropolitan.

(T) (33)623 757 215, Email : rboissin@hotmail.com

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### Abstract :

Long run returns of IPO firms' recommendations in Europe reveal possible conflicts of interest and pressures faced by financial analysts over the 1991-2005 period. Nevertheless, recent European legislations about investment research have led to better long run performance of IPO firms' recommendations issued by affiliated analysts over the 2001-2005 period. Findings reveal that market participants do not fully incorporate the perceived value of recommendations. Indeed, difference between affiliated and unaffiliated analysts' recommendations is statistically significant over one, three or five year horizon. The timing of recommendations specifies that investors pay more attention to affiliated analysts' recommendations made later in the aftermarket. This result could suggest that the later is the recommendation made in the IPO aftermarket the weaker is the pressure faced by affiliated analysts.

Keywords: Initial Public Offering, conflicts of interest, financial analysts, long run performance.

## Introduction :

The findings of academic research evoke the difficult objectivity of the financial analysts whose employer is a managing underwriter at the IPO. They overestimate the earnings or issue more positive recommendations. These studies have revealed that analysts were biased towards providing favourable reports and have suggested that the analysts are incited to the optimism in the commercial interest of their employer, to the detriment of their objectivity and reputation.

In 2002, Citigroup is confronted to 125 lawsuits, for the majority, against a renamed analyst. This analyst covered Worldcom, Lucent, Global Crossing, Winstar, AT\*T, and QWest, all have filed for bankruptcy. In February, 2001, while the price of Winstar drops near to 1 dollar, the analyst continues to give positive recommendation with a target price near to 50 dollars. The company has generated 24 million dollars in trading commissions. Between 1996 and 2002, Citigroup helped 81 companies of telecoms to raise 190 billion dollars. During 4 years, Worldcom has produced more than 100 million dollars of contracts for Citigroup.

But the scandals are not limited to the United States. They also rise in European markets.

For example, in Germany, the controversy rose about the analysts who recommended the young technological values of Neuer Markt, about 50 companies which have filed for bankruptcy without having aroused many suspicions. In 2001, the authority of the Frankfurt Stock Exchange opened an investigation on a suspect deal: the sale of 44 million shares Deutsche Telekom by Deutsche Bank for the benefit of an Asian investor. A transaction makes in a lower price than that of the market and which causes a decrease of more than 20 % compared to its market price while, simultaneously, the bank gave buy recommendations.

In France, Crédit Lyonnais was convicted in 2002 to indemnify a customer ruined by its bad advices. The LVMH company did not hesitate to summons a British analyst to appear before the court to the motive that she would have favoured the Gucci company, the customer of her employer, to the detriment of LVMH in its financial analyses. Further, the shareholders of the Kalisto company blamed Crédit Lyonnais for having communicated, via its financial analyses, false information to the market. The bank was, at the same time, an underwriter, market-maker, creditor and shareholder of Kalisto. Finally, in 2003, the price of the Suez company lost more than 4 %, following rumours that the group would have asked to certain analysts to revise their earnings forecasts.

However, in Europe, the independence of the analysts is less opened to doubt than in the United States, due to the institutional rules. Some practices, developed in the United States

and being able to compromise the objectivity of the analysts, are forbidden in Europe, especially the indexation of the analysts' compensation on the amount of IPOs.

This paper deals with the influence of investment banking ties between analysts' employers and the IPO firms that analysts cover on long run returns. Investment banks are mandated by the newly public firm in order to review the company and write reports about her. They gather the intention of investors to participate in the offering, and finally follow the newly issued security in the aftermarket. The investment banker analyst produces reports that include the collection and evaluation of information related to a firm's future performance. From this information, the analyst produces earnings forecasts, target prices and stock recommendations. The analysts of underwriters draw attention because their roles expose them to possible pressure by their employers. This paper addresses the question of the nature of its influence on the long run returns of European IPO firms over the 1991-2005 period.

Prior results find no systematic evidence of the influence of investment banking ties on returns of IPOs. Michaely and Womack (1999) find that the returns earned following investment banker analysts (hereafter affiliated analysts) for IPOs are significantly lower than those earned following non investment banker analysts (hereafter unaffiliated analysts). Dechow et al. (2000) find more pronounced underperformance of IPOs and SEOs with the highest growth forecasts made by affiliated analysts. Dugar and Nathan (1995), Lin and McNichols (1998) find no difference in the returns following affiliated and unaffiliated analysts. It is worth noting that these studies are applied on American markets.

To the best of our knowledge, it is the first study which investigates the influence of investment banking ties on the long run returns of IPOs in the European markets over the 1991-2005 period. This constitutes an out-of-sample test. Our observation period is large and overlaps the 2000s period characterized by significant regulatory changes in the financial analysts' investment research. We analyse long run performance from one year to five year following the IPO. We measure the influence of investment banking ties on the long run performance of IPOs during a five-year horizon. Then, we are able to observe the adjustment of long run performance for affiliated versus unaffiliated analysts' recommendations. We define lead manager plus co manager analyst as affiliated. We present our findings by dividing our sample period by three sub-periods in order to show that results vary substantially through time.

Conversely to prior studies, we focus on recommendations made within the three years after the IPO (most of prior studies focus only on the recommendations released the first year after the issuance). We are interested in the timing of the recommendations because we think, like Adams (2003), that investor reaction is stronger to analyst recommendation made later in the IPO aftermarket, because later coverage is more likely to have new information and is not anticipated by investor.

We find that recent European regulatory changes are very important for the analysts' investment research. Whereas affiliated analysts seem to suffer of pressure and a lack of independence over the 1991-2000 period, the opposite tendency appears over the 2001-2005 period, giving more consideration for these analysts. Long run returns reveal that investors do not recognize the full extent of this pressure, because we find a significantly negative mean difference between post-recommendation returns to the affiliated analysts' recommendations and those of unaffiliated analysts over the three and five-year horizon. The timing of recommendations suggests that investors give more weight to analyst coverage released later in the aftermarket. Over the 2001-2005 period, the dependence of affiliated analysts becomes very important and investors discount affiliated analysts' recommendations made within the first year following the IPOs compared to unaffiliated ones (statistically significant over the three-year horizon) whereas recommendations made later in the aftermarket reveal the superior information held by affiliated analysts.

The paper is organised as follow: we first analyze the existing literature in order to define our hypothesis. In a second section, we describe methodology, data and sample statistics. The third section presents findings. The last section concludes.

## 1 – Prior literature and hypothesis development:

### 1.1- Relationship between financial analysts and the investment banking services.

Most studies focus on potential influence which occurs when a firm's investment banking department provides services to a client, and its financial analyst issue research reports on the same client.

Dugar and Nathan (1995) find that market participants rely relatively less on the affiliated analysts' recommendations and their earning forecasts in forming their earnings expectations. However, the returns earned by following the investment recommendations of affiliated

analysts are not significantly different from returns earned by following the unaffiliated analysts' recommendations.

Michaely and Womack (1999) find, using a sample of 391 IPOs in the USA over the period 1990 and 1991, that affiliated analysts' recommendations perform more poorly than recommendations by unaffiliated analysts (consistent with Iskoz, 2003, Houston et al., 2006). Affiliated analysts issue recommendations that are overly optimistic (positively biased) and these analysts may be compelled to issue more positive recommendations on firms that have traded poorly in IPO aftermarket (consistent with James and Karceski, 2006). According to Chen (2004), even though the market reaction to favourable recommendations is less positive for affiliated analysts, long run return analyses suggest that analysts' affiliation is not significantly associated with long run abnormal returns after recommendations.

O'Brien et al. (2005) examine whether investment banking ties influence the speed with which analysts convey unfavourable news. Their findings indicate that banking ties increase analysts' reluctance to reveal negative news and cause them to accelerate good news. Moreover, the authors find that affiliated analysts are less likely than unaffiliated analysts to drop coverage.

Agrawal and Chen (2008) find that the level of analysts' stock recommendations is positively related to the magnitude of pressure they face. The authors specify that investors recognize analyst pressures and properly discount analyst opinions.

Since the burst of the internet bubble in 2000 and the bankruptcies which followed, value and integrity in investment research were the subject of a greater regulatory control. Recent studies are interested in the impact of these regulations. Clarke et al. (2009) examine, over the 2000-2007 period, the impact of NASD Rule 2711, NYSE Rule 472 and the Global Settlement on the recommendation performance of financial analysts. They find that analysts issue fewer strong buys and are less likely to issue innovative recommendations. Downgrades recommendations become more prevalent following these regulations, but they are significantly less informative. Finally, Independent analysts' recommendations are of inferior quality. Kadan et al. (2009) specify that, after these regulations, analysts are still reluctant to issue pessimistic recommendations for IPO firms and affiliated analysts are even more reluctant to be pessimistic about these stocks.

## 1.2 European legislation framework relating to conflicts of interest in investment research.

The stock market crisis which began in the United States in the fall of 2000, highlighted the dysfunctions in the management of financial companies among the largest market capitalizations, and by extension in the mode of elaboration of recommendations made by financial analysts. It has achieved the scale and difficulty of the question of conflicts of interest and their good management inside investment banks. Regulators put financial analysts under tight surveillance and have launched several reforms. Both requirements and guidelines have been developed in the United States and Europe to eliminate, manage or disclose analyst conflicts of interest. In Europe, the IOSCO settlement (2003) lays down some principles and measures to prevent and manage conflicts of interest.

Principles	Core Measures
<p>Analysts' trading activities or financial interests do not prejudice their research and recommendations.</p>	<p>Prohibiting analysts from trading securities or related derivatives ahead of publishing research on the issuer of those securities; Prohibiting analysts from covering an issuer, where the analyst serves as an officer, director or member of the issuer's supervisory board.</p>
<p>Analysts' research and recommendations should be not prejudiced by the trading activities or financial interests of the firms that employ them.</p>	<p>Prohibiting firms that employ analysts from improperly trading securities or related derivatives ahead of the analyst publishing research on the issuer of those securities. Prohibiting analysts from covering an issuer in which members of the analyst's firm serve as officers, directors or members of the supervisory board</p>
<p>Analysts' research and recommendations should be not prejudiced by the business relationships (investment banking or other services to the issuers) of the firms that employ them.</p>	<p>Establishing robust information barriers between analysts and a firm's other divisions in order to limit the potential for conflicts of interest, prohibiting analysts from participating in investment banking sales pitches and road shows</p>
<p>If the analyst's likelihood for promotion or financial bonus depends on his or her ability to promote the firm's investment banking business or promote shares that the analyst's employer has underwritten, then objectivity may be compromised.</p>	<p>Prohibiting analysts from reporting to the investment banking function; prohibiting analyst compensation from being directly linked to specific investment banking transactions</p>
<p>Issuers and shareholders often have a deep interest in the reviews provided by securities analysts because these reviews encourage or dissuade investors from purchasing or selling shares of a company. These outside parties may try to pressure an analyst into making a favourable recommendation.</p>	<p>Requiring that analysts, or the firms that employ analysts, publicly disclose whether the issuer or other third party provided any compensation or other benefit in connection with a research report</p>
<p>Disclosure of conflicts of interest should be complete, timely, clear and made in a prominent manner so that investors obtain the full benefit of the information provided.</p>	
<p>Analysts should be both competent and honest.</p>	<p>Imposing general legal obligations designed to hold analysts to high standards of integrity</p>
<p>Investor education should play an important role in managing analyst conflicts of interest.</p>	<p>Investor education can focus on making investors aware of the disclosure rules in their own jurisdiction so that they can better conduct their research and evaluate potential biases and conflicts of interest.</p>

Two Directives complete the IOSCO report. The first one is the Directive on insider dealing and market manipulation (market abuse) of 2003 which is intended to guarantee the integrity



of European financial markets and increase investor confidence. The second is the Directive on markets in financial instruments of 2004. These directives prevent issuers to influence the research produced by investment firms. They also prevent the analysts to disclose information likely to influence prices prior to disclosure to the rest of the market participants.

### 1.3 Hypotheses development

Financial analysts may be face conflicts of interest which fear that their recommendations become worthless to investors.

As in Bradley et al. (2008), we focus on the market's performance to a recommendation made by an affiliated analyst or not.

Affiliated recommendations may be associated with a more positive announcement effect than unaffiliated recommendations if the market views these analysts as having sufficiently superior information or expertise to more than offset any conflict of interest.

*H1: Market performance to affiliated recommendations may be associated with a more positive announcement effect than unaffiliated recommendations (Superior information hypothesis).*

Affiliated recommendations may be associated with a less positive announcement effect than unaffiliated recommendations if the market views these analysts as having a greater conflict of interest that is not offset by superior information.

*H2: Market performance to affiliated recommendations may be associated with a less positive announcement effect than unaffiliated recommendations (Sceptical markets hypothesis).*

Lastly, there may be no difference in announcement effects because the market is naive about the differential conflicts of interest.

*H3: Market performance may be no difference in announcement effects between affiliated and unaffiliated recommendations (Naive markets hypothesis).*

Two explanations may be advanced: 1) there may be no difference in announcement effects because, on balance, the more severe conflicts that affiliated analysts face are offset by their superior information and 2) there may be no difference in announcement effects because the incentives for unaffiliated analysts to curry favour are so strong that they face conflicts of interest just as severe as affiliated analysts.

## 2 - Methodologies, data and sample statistics:

### 2.1 - Methodologies:

The results of long term performance studies are very sensitive to methodological choices. We therefore present our results using two frequently used and recommended methodologies (Brav and Gompers (1997), Barber and Lyon (1997)).

Firstly, we use the calendar-time approach as in Fama and French (1996). Their three-factor model says that the expected return on a portfolio in excess of the risk-free rate  $[(E(R_i) - R_f)]$  is explained by the sensitivity of its return to three factors: (i) the excess return on a broad market portfolio  $(R_M - R_f)$ ; (ii) the difference between the return on a portfolio of small stocks and the return on a portfolio of big stocks (SMB, small minus big); and (iii) the difference between the return on a portfolio of high-book-to-market stocks and the return on a portfolio of low-book-to-market stocks (HML, high minus low). Specifically, the expected excess return on portfolio  $i$  is,

$$E(R_i) - R_f = \alpha_i + \beta_i[E(R_M) - R_f] + s_i E(SMB) + h_i E(HML) + \varepsilon_i,$$

where  $E(R_i)$  is the monthly return on the IPO portfolio,  $R_f$  is the one-month Treasury bill rate,  $E(R_M)$  is the monthly return on an equally-weight market portfolio of stocks listed on their respective European market,  $E(SMB)$  is the difference between the returns on portfolios of small and big stocks (below or above the median), and  $E(HML)$  is the difference between the returns on portfolios of high- and low-book to market stocks (above and below the 0.7 and 0.3 fractiles of book-to-market ratios).

Secondly, we perform an event-time approach as in Brav and Gompers (1997). Fama and French (1992, 1993) have shown that size and book-to-market are important determinants of the cross section of stock returns. We compare performance of IPOs to size and book-to-market portfolios. Starting in January 1991, we use all stocks listed on their respective market to create size quartile breakpoints with an equal number of firms in each size quartile. For example, we use Euronext stocks for France, General Standard, Prime Standard and Entry Standard stocks for Germany, Main Market and AIM stocks for England. Size is measured as the number of shares outstanding times the stock price at the end of the preceding month. Monthly book-to-market data are extracted from Datastream database for each firm. Within each size quartile we form four book-to-market portfolios with an equal number of firms in

each book-to-market quartile to form 16 size and book-to-market portfolios. Equally weighted returns are calculated for each portfolio. In order to avoid comparing IPO firms to themselves, we eliminate IPO firms from the various portfolios for five years after their equity issue. Each issue is matched to its corresponding benchmark portfolio.

Long term performance is calculated using Buy-and-Hold Abnormal Return (BHAR).

The return on a buy-and-hold investment in the sample firm minus the return on a buy-and-hold investment in a portfolio with an appropriate expected return (BHAR) is

$$BHAR_{it} = \prod_{t=1}^{\tau} [1 + R_{it}] - \prod_{t=1}^{\tau} [1 + E(R_{it})]$$

where  $R_{it}$  is defined as the month  $t$  simple return on a sample firm,  $E(R_{it})$  as the month  $t$  expected return for the sample firm, i.e. the return of firm  $i$ 's benchmark over the same period.

Long term buy and hold abnormal returns are positively skewed and this positive skewness leads to negatively biased t-statistics. Lyon et al. (1999) recommend, in order to eliminate the skewness bias, the use of a bootstrapped skewness-adjusted t-statistic.

## 2.2 Data and Sample statistics

Data come from different sources. We first identify firms that went public during 1991-2005 from the Thomson Financial Securities Data Company (SDC) Common Stock initial Public Offerings database. Consistent with prior studies, we eliminate IPOs that are classified as ADRs, REITs, closed-end funds, along with offerings having a file range midpoint of less than €8. Our sample contains 525 IPO firms whose 132 IPOs went public in England, 205 IPOs went public in Germany and 188 IPOs went public in France.

Analyst data are collected from the analyst-by-analyst I/B/E/S historical earnings estimate database. I/B/E/S provides us 9,705 recommendations made during the three years following IPO between 1991 and 2005.

Long run performance is calculated using the Datastream monthly stock price database.

Table 1 presents a description of the investment recommendations. In panel A, the frequency distributions show that 86 (47,5%) of the affiliated analysts' recommendations are either strong buy or buy whereas 1356 (51,7%) of the unaffiliated analysts' recommendations fall into these categories over the period 1991-1998. During the internet bubble period (1999-2000) both affiliated and unaffiliated analysts tend to be more optimistic with near to 74%

(60,7%) of affiliated (unaffiliated) analysts' strong buy and buy recommendations. On average, affiliated analysts are more optimistic than unaffiliated analysts. This result is confirmed over the 2001-2005 period. Panel B shows that the mean affiliated analyst's recommendation is 2,02 whereas the mean unaffiliated analyst's recommendation is 2,28 over the 1999-2000 period. The Student parametric test and Wilcoxon non parametric test reject at one percent level the hypothesis that the affiliated analyst's recommendation is equal to the unaffiliated analyst's recommendation. This result is confirmed over the 2001-2005 period.

Insert Table 1
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### 3. Results

As Bradley et al. (2007) note, a common oversight in examining analyst recommendations is the endogenous problem between performance and analysts' coverage. Meaning, certain time passes after the issuance of an IPO, its quality is revealed to public through financial statements and other public sources. So, other savvy investors could have predicted the long run performance of IPOs. The analysts may just be jumping into the bandwagon when information is generated through some other sources such as financial statements. Our research model overcomes this pitfall by calculating buy and hold abnormal returns for each recommendation's date.

Table 2 shows financial analysts' recommendations as a whole (buy; hold and sell) made within the three years following the IPO date. Long run performance is calculated over the five, three and one-year horizon. We find, over the 1991-1998 period, that market participants do not distinguish between recommendations made by affiliated analysts and those made by unaffiliated analysts. Buy-and-hold returns do not reveal any statistically significant difference between affiliated and unaffiliated analysts' recommendations whereas the Fama-French model shows that investing an equal amount in portfolios covered by affiliated analysts give a -0,24% return per month that is statistically significant (at 5% level) compared to portfolios covered by unaffiliated analysts (monthly return of 0,85%, statistically significant at 1% level). Internet bubble period (1999-2000) presents similar findings. Buy-and-Hold abnormal returns and Fama-French model agree about the lack of significant difference between affiliated and unaffiliated analysts' recommendations.

The opposite appears over the 2001-2005 period, when IPOs covered by affiliated analysts exhibit a poor underperformance compared to IPOs covered by unaffiliated analysts whatever the horizon we consider. For example, the five-year performance of affiliated analysts'

recommendations is -45,73% whereas unaffiliated analysts' recommendations is -62,66%. This difference of 16,95% is statistically significant at 1% level. This result is confirmed by Fama-French model.

Insert Table 2
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We have found in table 1 that financial analysts tend to be optimistic and affiliated analysts are more optimistic than unaffiliated analysts. On this report, we present in table 3 long run performance of favourable (strong buy and buy) recommendations made by affiliated and unaffiliated analysts. We find, over the 1991-1998 period, no statistically significant difference between affiliated and unaffiliated analysts' recommendations using event time approach whereas the calendar time approach underlines a statistically significant difference at 10% level in the monthly return of IPOs covered by unaffiliated analysts compared to their affiliated counterparts. So, investing an equal amount in IPOs' recommendations issued by affiliated analysts exhibit -0,15% per month whereas IPOs' recommendations made by unaffiliated analysts win 0,97% per month. Over the 1999-2000 and 2001-2005 periods, investor seems naive about the conflicts of interest faced by financial analysts.

Insert Table 3
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An interesting question regarding these results is whether they would be different if we retain another definition of affiliation. Like McNichols et al. (2007), we separate our sample of IPOs into two mutually exclusive groups, based on analysts' recommendations: IPOs with recommendations only from unaffiliated analysts and IPOs with recommendations from both affiliated and unaffiliated analysts. Findings appear in Table 4. We find that IPOs' strong buy and buy recommendations made by both affiliated and unaffiliated analysts earn significantly lower returns than IPOs' strong buy and buy recommendations made only by unaffiliated analysts. Over the 1991-1998 period, IPOs recommended by both affiliated and unaffiliated analysts have a three-year performance of -23,65% that is significantly different from -14,57% for recommendations made only by unaffiliated analysts. The Fama-French model specifies that monthly return of portfolios formed by IPOs recommended by both affiliated and unaffiliated analysts is -0,33% whereas monthly return of portfolios formed by IPOs recommended by only unaffiliated analysts is 1,03% (difference is statistically significant at 5% level). Over the 1999-2000 period, three-year buy-and-hold abnormal returns of IPOs

recommended by both affiliated and unaffiliated analysts is much severe than those recommended by only unaffiliated analysts. The difference is statistically significant at 1% level. Over the 2001-2005 period, whatever the horizon considered, IPOs recommended by both affiliated and unaffiliated analysts exhibit larger underperformance than those recommended by only unaffiliated analysts (significant at 1% level).

These results could confirm the sceptical market hypothesis but more interestingly highlight the question of the interpretation of the conflicts of interest according to the definition of affiliation used.

Insert Table 4
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Table 5 focuses on the timing of analysts' strong buy and buy recommendations. According to Adams (2003), we estimate that investor reaction is stronger to analyst recommendations made later in the IPO aftermarket because later recommendation is more likely to have new information and is not anticipated by investors. We divide strong buy and buy recommendations into 3 categories, those made within first year following the IPO, those made within second year after the IPO and those made within third year following the IPO.

Over the 1991-1998 period, market participants do not distinguish between affiliated and unaffiliated analysts' recommendations made the first year following the offering. A significant difference appears only for recommendations made later in the aftermarket. Indeed, affiliated analysts' recommendations made second year after the IPO date have five-year performance of -13,93% compared to -38,99% for unaffiliated analysts' recommendations (difference statistically significant at 10% level). Similar results hold for recommendations issue third year after the IPO with a five year performance of 3,65% for affiliated analysts' recommendations compared to -30,9% for unaffiliated analysts' recommendations (difference statistically significant at 1% level).

Over the 1999-2000 period, we find no difference between affiliated and unaffiliated analysts' recommendations. This could be attributable to the incentives for unaffiliated analysts to curry favour in this particular period and therefore they could face conflicts just as severe as affiliated analysts.

Over the 2001-2005 period, affiliated analysts' recommendations made within the first year following the offering exhibit a worse three-year underperformance (mean of -29,35%) than their unaffiliated analysts' counterparts (mean of -19,08%). This difference is statistically significant at 10% level. This result could be understood by investors to be the fulfilment of

an implicit contract to make positive recommendation on their IPOs, and that these analysts will fulfil their obligation early in the IPO aftermarket. However, the opposite results are found for recommendations made second year after the IPO. Indeed, affiliated analysts' recommendations exhibit a poor three-year underperformance of -20,86% compared to unaffiliated analysts' recommendations of -32,8% (difference is statistically significant at 5% level). This result is reinforced for recommendations made third year after the IPO date whatever the horizon we consider.

Globally, These results suggest that investors perceive affiliated analysts' recommendations made later in the aftermarket as more valuable than earlier recommendations because the information analysts have had the additional time to provide analysis that is not anticipated by the market. We could suppose that conflicts of interest and pressure faced by affiliated analyst are influenced by the timing of recommendations. The earlier is the recommendation made in the IPO aftermarket the stronger is the pressure faced by affiliated analysts.

Insert Table 5
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As in previous studies, we suppose that initiation and continuation (upgrade, downgrade or reiteration) convey more information than the value of recommendation itself (see for instance Irvine, 2003; Jegadeesh et al., 2004). Table 6 shows long run returns of analysts' recommendations depending on whether they are initiation, upgrade, downgrade or reiteration.

Over the 1991-1998 period, returns of initiations do not reveal any difference between affiliated and unaffiliated analysts' recommendations whatever the horizon. By contrast, the Fama-French model shows that initiation made by unaffiliated analyst exhibits monthly return of 0,89% compared to -0,28% for affiliated analyst. This difference is statistically significant at 10% level. Upgrades and Downgrades made by affiliated analysts present better five-year returns compared to unaffiliated analysts (statistically significant at conventional levels). Reiterations convey no information.

Over the 1999-2000 period, only upgrades show difference between affiliated and unaffiliated analysts. Market discounts affiliated analysts' upgrades compared to those made by unaffiliated analysts. This result could confirm the sceptical market hypothesis. We note that market fully incorporate the extent of the conflict of interest because we find no significantly

negative mean difference between three or five-year upgrades returns to the affiliated and those of unaffiliated analysts.

Over the 2001-2005 period, returns of initiations present significant difference over one-year horizon between affiliated and unaffiliated analysts. Returns of affiliated analysts' initiations are -7,79% compared to -20,05% for unaffiliated analysts' initiations. The difference of 12,25% is statistically significant at 1% level and could confirm the superior information hypothesis. Similar results appear for upgrades and downgrades whatever the horizon considered.

Insert Table 6
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We report two multivariate regression models in table 7 to estimate the weight of favourable (strong buy and buy) recommendations made by affiliated analysts. Model 1 distinguishes IPOs' recommendations issued by affiliated or unaffiliated analysts whereas Model 2 distinguishes IPOs' recommendations issued by both affiliated and unaffiliated analysts or unaffiliated analysts only. Thereby, models 1 and 2 are different in the definition of the affiliation.

We find that favourable recommendations made by affiliated analysts are discounted by market participants over three and five-year horizon (confirmed by both model 1 and model 2). This result suggests that (1) investors do not fully incorporate the perceived value of affiliated analysts' recommendations and (2) the sceptical market hypothesis could be confirmed in European markets. However, when we distinguish favourable recommendations issued for a same IPO by both affiliated and unaffiliated analysts to those issued by unaffiliated analysts only, we find that market participants do not pay attention to potential conflict of interest. This result confirms the impact of the definition of affiliation used. Both model 1 and model 2 show that timing variable explains in a significant way (at 5% level) 60-month performance of IPOs' recommendations. The coefficient is negative which indicates that later is the recommendation made in the IPO aftermarket the weaker is the pressure faced by affiliated analysts. Model 2 reveals over a five-year horizon that analyst activity has an impact on long run performance if analyst issued a recommendation as affiliated on another IPO for previous one month.

Insert Table 7
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#### 4. Conclusion

The study of financial analysts' conflicts of interest in Europe over the 1991-2005 period reveals that recent European legislation is very important in order to manage and avoid conflicts of interest. Our observation period is large and overlaps the post bubble period (2001-2005) characterized by these recent legislation on conflicts of interest. We find over the 1991-1998 period that long run returns of IPOs' recommendations highlight the possible pressure faced by affiliated analysts. To the best of our knowledge, this is the first study applied to conflict of interest in investment research which extends the observation horizon to three and five years after the issuance.

Over the 1999-2000 period, we find that European markets are naive concerning potential conflicts of interest. Indeed, we find no difference between returns of IPOs' recommendations issued by affiliated and unaffiliated analysts whatever the horizon. This result could confirm our hypothesis 3 about naive market.

Over the 2001-2005 period, recent European legislation attempt to restore investors' confidence. Both regulators and media scrutinize financial analysts' activities and this has a beneficial impact on long run returns of affiliated analysts' recommendations. Timing of recommendations becomes very important over this recent period. Indeed, we find that the later is the recommendation made in the IPO aftermarket the weaker is the pressure faced by affiliated analysts.

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**Table 1 Difference in investment recommendations.**

<b>Panel A Distribution of investment recommendations</b>												
Recommendations	Affiliated Analysts						Unaffiliated Analysts					
	1991-1998		1999-2000		2001-2005		1991-1998		1999-2000		2001-2005	
	Freq	Cum.%	Freq	Cum.%	Freq	Cum.%	Freq	Cum.%	Freq	Cum.%	Freq	Cum.%
1 Strong buy	46	25,4	71	32,4	66	16,8	701	26,7	584	24,1	601	15,5
2 Buy	40	47,5	92	74,4	132	50,4	655	51,7	889	60,7	1179	46
3 Hold	72	87,3	42	93,6	144	87	875	85,1	711	90	1315	80
4 Underperform	19	97,8	8	97,2	38	96,7	239	94,2	170	97	525	93,6
5 Sell	4	100	6	100	13	100	150	100	72	100	246	100
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Initiation	77	42,5	122	55,7	106	27	1240	47,3	1141	47	1274	33
Upgrade	43	23,7	38	17,3	61	15,5	547	21	424	17,5	825	21,3
Downgrade	49	27,1	39	17,9	124	31,5	667	25,4	496	20,5	1131	29,2
Reiteration	12	6,7	20	9,1	102	26	166	6,3	365	15	636	16,5
<b>Panel B test for difference in investment recommendations</b>												
	N	Mean	Median	Std.Dev.								
<b>1991-1998</b>												
Affiliated	181	2,42	3	1,05								
Unaffiliated	2620	2,42	2	1,14								
<i>Stat</i>		-0,1	0,4									
<b>1999-2000</b>												
Affiliated	219	2,02	2	0,95								
Unaffiliated	2426	2,28	2	1								
<i>Stat</i>		-3,7***	-4***									
<b>2001-2005</b>												
Affiliated	393	2,49	2	0,99								
Unaffiliated	3866	2,65	3	1,09								
<i>Stat</i>		-2,7***	-2,5***									

**Table 2: Long run performance of recommendations for IPO firms over the 1991-2005 period.**

Table 2 presents long run performance for buy, hold and sell recommendations issued by affiliated and unaffiliated analysts over the 1991-2005 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, and 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively.

	N	Type of abnormal return							
		Size & Book to Market-adjusted						Fama-French	
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>1991 to 1998</b>									
Affiliated	181	-21,07	-3,1***	-15,02	-1,9**	1,41	0,4	-0,24	-0,4
Unaffiliated	2620	-31,80	-9,5***	-16,98	-6,7***	1,96	1,9**	0,85	4,3***
Difference		10,73	1,5	1,97	0,3	-0,54	-0,1	-1,1	-2,1**
<b>1999 to 2000</b>									
Affiliated	219	-61,40	-7,2***	-41,93	-7,1***	-12,09	-2,3***	-0,39	-0,4
Unaffiliated	2426	-61,26	-23,5***	-36,69	-18,3***	-9,69	-5,2***	-0,12	-0,4
Difference		-0,14	-0,1	-5,23	-1,3	-2,39	-0,5	-0,27	-0,3
<b>2001 to 2005</b>									
Affiliated	393	-45,73	-6,2***	-20,66	-4,9***	-14,83	-4,8***	1,23	2,5***
Unaffiliated	3866	-62,66	-12,5***	-31,26	-12***	-23,11	-17,6***	0,26	1
Difference		16,95	2,4***	10,61	2,7***	8,29	2,9***	0,97	2,5***

**Table 3: Long run performance of favorable recommendations for IPO firms over the 1991-2005 period**

Table 3 presents long run performance for strong buy and buy recommendations issued by affiliated and unaffiliated analysts over the 1991-2005 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, and 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively

	N	Type of abnormal return							
		Size & Book to Market-adjusted				Fama-French			
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>1991 to 1998</b>									
Affiliated	86	-34,6	-3,4***	-31,78	-3,4***	0,9	0,1	-0,15	-0,3
Unaffiliated	1356	-31,89	-6,2***	-16,08	-4,3***	5,98	4,3***	0,97	4,1***
Difference		-2,71	-0,3	-15,7	-1,6	-5,88	-1,2	-1	-1,9*
<b>1999 to 2000</b>									
Affiliated	163	-62,41	-6,5***	-40,44	-6,6***	-5,43	-0,9	-0,45	-0,4
Unaffiliated	1473	-61,57	-18,6***	-35,59	-13,4***	-3,37	-1,4	-0,16	-0,5
Difference		-0,84	-0,1	-4,86	-1,2	-2,05	-0,3	-0,29	-0,3
<b>2001 to 2005</b>									
Affiliated	198	-59,22	-6,5***	-30,72	-4,8***	-14,72	-3,7***	0,87	1,3
Unaffiliated	1780	-62,86	-9,8***	-28,43	-7,3***	-18,75	-9,2***	0,13	0,5
Difference		3,67	0,4	-2,27	-0,4	4,04	0,9	0,73	1,4

**Table 4 : Long run performance of favorable recommendations for IPO firms over the 1991-2005 period, differentiated by both affiliated and unaffiliated analysts and unaffiliated analysts only.**

Table 4 presents long run performance for strong buy and buy recommendations for IPO firms issued by both affiliated and unaffiliated analysts and unaffiliated analysts only over the 1991-2005 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, and 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively.

	N	Type of abnormal return							
		Size & Book to Market-adjusted				Fama-French			
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>1991 to 1998</b>									
Both aff. & unaff.	631	-34,39	-9***	-23,65	-6,7***	5,35	2,9***	-0,33	-0,6
Unaffiliated only	808	-30,07	-4,3***	-11,57	-2,2**	6	3,2***	1,03	3,3***
Difference		-4,32	-0,6	-12,09	-2,2**	-0,65	-0,2	-1,25	-2,1**
<b>1999 to 2000</b>									
Both aff. & unaff.	810	-64,19	-14***	-40,06	-10***	-5,90	-2,3**	0,24	0,2
Unaffiliated only	807	-59,29	-13,2***	-31,99	-9,4***	-1,27	-0,4	1,15	2,2**
Difference		-4,91	-1,3	-8,07	-2,6***	-4,63	-1,1	-0,90	-0,6
<b>2001 to 2005</b>									
Both aff. & unaff.	1068	-70,92	-7,2***	-33,63	-5***	-21,04	-11,9***	0,98	1,8*
Unaffiliated only	894	-53,66	-7,7***	-22,20	-5,3***	-15,04	-5,2***	0,21	0,5
Difference		-17,26	-3***	-11,43	-2,7***	-6	-2,7***	0,77	1,7*

**Table 5: Long run performance of IPO firms based on timing of recommendations.**

Table 5 presents long run performance for strong buy and buy recommendations for IPO firms by distinguishing timing of recommendations over the 1991-1998 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively.

	N	Type of abnormal return							
		Size & Book to Market-adjusted				Fama-French			
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>Recommendation issued first year after the IPO date</b>									
Affiliated	105	-31,43	-3,3***	-15,80	-1,4	3,86	0,9	0,33	0,6
Unaffiliated	1043	-26,49	-4,4***	-14,89	-4,2***	7,07	5,3***	0,71	2,7***
Difference		-4,94	-0,5	-0,91	-0,1	-3,21	-0,6	-0,29	-0,5
<b>Recommendation issued second year after the IPO date</b>									
Affiliated	45	-13,93	-1,1	-22,17	-1,8*	0,4	0,1	0,31	0,4
Unaffiliated	862	-38,99	-8,5***	-36,25	-9,5***	-5,48	-3,1***	1,26	3,9***
Difference		25,05	1,9*	14,08	1,1	5,90	0,8	-0,73	-1,1
<b>Recommendation issued third year after the IPO date</b>									
Affiliated	31	3,65	0,3	-1,97	-0,1	-5,42	-0,5	1,60	1,4
Unaffiliated	715	-30,90	-7,8***	3,19	0,6	3,48	1,7*	1,69	5,2***
Difference		34,55	2,8***	-5,16	-0,4	-8,90	-1,2	0,58	0,5



**Table 5(continued): Long run performance of IPO firms based on timing of recommendations.**

Table 5 (continued) presents long run performance for strong buy and buy recommendations for IPO firms by distinguishing timing of recommendations over the 1999-2000 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively.

	N	Type of abnormal return							
		Size & Book to Market-adjusted				Fama-French			
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>Recommendation issued first year after the IPO date</b>									
Affiliated	127	-59,68	-6***	-41,18	-6,4***	-6,58	-0,8	-0,61	-0,6
Unaffiliated	792	-56,73	-12,8***	-34,56	-10,5***	-5,78	-1,8*	-0,62	-1,3
Difference		-2,94	-0,5	-6,62	-1,4	-0,79	-0,1	0,01	0,1
<b>Recommendation issued second year after the IPO date</b>									
Affiliated	68	-55,13	-3,4***	-34,30	-3***	-19,93	-2,3**	-0,47	-0,4
Unaffiliated	933	-60,16	-15,3***	-35,60	-10,7***	-12,78	-4***	-0,33	-0,9
Difference		5,03	0,6	1,30	0,2	-7,15	-1	-0,14	-0,1
<b>Recommendation issued third year after the IPO date</b>									
Affiliated	24	-88,28	-1,4	-67,48	-1,9**	-19	-1,2	-1,79	-1
Unaffiliated	701	-67,83	-13,4***	-40,57	-10,1	-10	-3***	-0,03	-0,1
Difference		-20,45	-1,4	-26,91	-1,7*	-9	-0,6	-1,76	-1,1

**Table 5(continued): Long run performance of IPO firms based on timing of recommendations.**

Table 5 (continued) presents long run performance for strong buy and buy recommendations for IPO firms by distinguishing timing of recommendations over the 2001-2005 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, and 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively.

	N	Type of abnormal return							
		Size & Book to Market-adjusted						Fama-French	
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>Recommendation issued first year after the IPO date</b>									
Affiliated	115	-48,11	-5,6***	-29,35	-5,1***	-10,59	-3***	1,13	2,1**
Unaffiliated	713	-47,68	-11,6***	-19,08	-6,3***	-14,20	-9,5***	0,30	0,8
Difference		-0,43	-0,1	-10,26	-1,8*	3,60	1	0,84	1,6
<b>Recommendation issued second year after the IPO date</b>									
Affiliated	133	-40,66	-3***	-20,86	-3,9***	-22,36	-3,7***	0,79	1,1
Unaffiliated	1326	-55,87	-5,9***	-32,80	-10,7***	-28,80	-20,3***	0,24	0,8
Difference		15,21	1,3	11,94	2,2**	6,44	1,3	0,55	0,8
<b>Recommendation issued third year after the IPO date</b>									
Affiliated	145	-48,68	-3,7***	-13,70	-1,6	-11,28	-2**	1,5	2,1**
Unaffiliated	1827	-73,87	-9,8***	-34,86	-8,3***	-22,47	-10,3***	0,24	0,9
Difference		25,19	1,8*	21,16	2,5***	11,19	2**	1,27	2**

**Table 6: Long run performance of initiation and continuation recommendations for IPO firms.**

Table 6 presents long run performance for initiation and continuation (upgrade, downgrade and reiteration) recommendations issued by affiliated and unaffiliated analysts over the 1991-1998 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, and 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively.

	N	Type of abnormal return							
		Size & Book to Market-adjusted				Fama-French			
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>Initiation</b>									
Affiliated	77	-49,93	-4,2***	-25,99	-1,5	-2,19	-0,4	-0,28	-0,5
Unaffiliated	1240	-34,20	-6,7***	-21,89	-6,5***	3,23	2,3***	0,89	3,8***
Difference		-15,73	-1,5	-4,1	-0,3	-5,43	-1,1	-1,18	-1,8*
<b>Upgrade</b>									
Affiliated	43	-2,17	-0,2	-8,81	-0,8	3,44	0,5	0,56	0,7
Unaffiliated	547	-27,15	-4,7***	-6,34	-1	7,08	3,2***	1,26	4***
Difference		24,98	1,9**	-2,47	-0,2	-3,64	-0,5	-0,54	-0,8
<b>Downgrade</b>									
Affiliated	49	0,29	0,1	-2,10	-0,2	1,10	0,1	0,94	1,5
Unaffiliated	667	-31,44	-4,5***	-16,92	-3,2***	-3,40	-1,7*	0,74	2,6***
Difference		31,73	2,5***	14,82	1,2	4,50	0,6	0,20	0,3
<b>Reiteration</b>									
Affiliated	12	9,10	0,3	-19,60	-0,7	18,59	1,2	1,40	1,6
Unaffiliated	166	-30,73	-2,6***	-15,65	-1,2	-2,88	-0,7	1,13	2,8***
Difference		39,84	1,2	-3,96	-0,1	21,47	1,4	0,38	0,5

**Table 6 (continued): Long run performance of initiation and continuation recommendations for IPO firms.**

Table 6 (continued) presents long run performance for initiation and continuation (upgrade, downgrade and reiteration) recommendations issued by affiliated and unaffiliated analysts over the 1999-2000 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, and 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively.

	N	Type of abnormal return							
		Size & Book to Market-adjusted				Fama-French			
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>Initiation</b>									
Affiliated	122	-57,18	-5,2***	-37,61	-4,8***	-5,19	-0,7	-0,59	-0,7
Unaffiliated	1141	-60,83	-16,4***	-36,92	-13,7***	-8,02	-2,9***	-0,30	-0,9
Difference		3,65	0,6	-0,69	-0,2	2,83	0,4	-0,29	-0,3
<b>Upgrade</b>									
Affiliated	38	-63,61	-2,4***	-42	-2,3**	-16,56	-1,8*	-1,06	-0,5
Unaffiliated	424	-60,18	-9,4***	-34,37	-6,7***	1,08	0,2	-0,33	-0,8
Difference		-3,43	-0,3	-7,63	-0,8	-17,64	-1,9**	-0,73	-0,4
<b>Downgrade</b>									
Affiliated	39	-70,67	-3,1***	-52,72	-2,3**	-23,06	-1,7*	-0,53	-0,4
Unaffiliated	496	-62,31	-10,7***	-39,46	-9,7***	-22,08	-5,4***	-0,41	-1,2
Difference		-8,36	-0,8	-13,26	-1,3	-0,98	-0,1	-0,12	-0,1
<b>Reiteration</b>									
Affiliated	20	-64,83	-3,5***	-47,05	-3,5***	-24,23	-1,6	-0,01	-0,1
Unaffiliated	365	-62,39	-9,3***	-34,93	-5,9***	-10,60	-2,6***	-0,01	-0,1
Difference		-2,43	-0,2	-12,11	-0,9	-13,64	-1	0	0,1

**Table 6 (continued): Long run performance of initiation and continuation recommendations for IPO firms.**

Table 6 (continued) presents long run performance for initiation and continuation (upgrade, downgrade and reiteration) recommendations issued by affiliated and unaffiliated analysts over the 2001-2005 period. Long run performance is computed as Buy and Hold Abnormal Returns over 12, 36, and 60-month performances. Bootstrapped Skewness-Adjusted (t) test is presented to estimate whether the BHAR or the difference between sample distribution are statistically significant. \*, \*\* and \*\*\* indicates significant difference at 10%; 5% and 1% level respectively.

	N	Type of abnormal return							
		Size & Book to Market-adjusted						Fama-French	
		BHAR60 (%)	<i>t-stat</i>	BHAR36 (%)	<i>t-stat</i>	BHAR12 (%)	<i>t-stat</i>	Alpha(%)	<i>t-stat</i>
<b>Initiation</b>									
Affiliated	106	-47,43	-4,1***	-27,41	-4,3***	-7,79	-1,4	0,65	1,2
Unaffiliated	1274	-57,63	-10,6***	-28,05	-7,5***	-20,05	-8,7***	0,35	1,3
Difference		10,20	1,2	0,64	0,1	12,25	2,5***	0,30	0,6
<b>Upgrade</b>									
Affiliated	61	-20,79	-1,1	-9,86	-1	-0,4	-0,1	1,25	1,9**
Unaffiliated	825	-63,15	-5***	-27,62	-4,3***	-18,5	-6,7***	0,21	0,7
Difference		42,36	2,2**	17,75	1,8*	18,09	2,5***	1,04	1,7*
<b>Downgrade</b>									
Affiliated	124	-46,01	-3,1***	-24,94	-3,4***	-26,07	-5,2***	1,06	1,9**
Unaffiliated	1131	-70,85	-5,7***	-39,92	-11,7***	-30,81	-17,3***	0,31	1,1
Difference		24,84	1,9*	14,98	2,2**	4,73	1,1	0,75	1,6
<b>Reiteration</b>									
Affiliated	102	-58,22	-4,2***	-14,90	-1,5	-17,09	-2,4***	0,73	0,6
Unaffiliated	636	-57,32	-5,9***	-27,05	-6,3***	-21,58	-6,9***	0,15	0,5
Difference		-0,9	-0,1	12,14	1,3	4,48	0,6	0,58	0,5

**Table 7: Cross-sectional regressions of long run performance of IPOs over the 1991-2005 period.**

The dependant variable is Buy-and-Hold Abnormal Return. Panel A (B and C) focuses over a five (three and one) -year horizon respectively.\* (and respectively, \*\*, \*\*\*) indicates that the coefficient is significantly different from 0 at a 10% (and respectively, 5%, 1%) level using Student t-statistics. We use cluster OLS regression model. This specifies that the observations are independent across groups but not necessarily independent within groups.

	BHAR 60 9325 observations (508 IPOs)		BHAR 36 9690 observations (524 IPOs)		BHAR 12 9705 observations (525 IPOs)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
<i>Intercept</i>	0,007	-0,002	0,007	0,040	0,014	0,010
<i>Previous analyst activity</i>	0,100	0,150**	-0,012	0,028	0,003	0,013
<i>Affiliation</i>	0,127	-0,115	0,130*	-0,060	0,016	0,016
<i>Favorable</i>	-0,102***	-0,003	-0,097***	-0,104	0,024	0,019
<i>Timing</i>	-0,080**	-0,091**	-0,016	-0,022	-0,025	-0,025
<i>Dispersion</i>	-0,814***	-0,811***	-0,471***	-0,466***	-0,052	-0,049
<i>Coverage</i>	-0,043	-0,021	0,021	0,041	0,034	0,025
<i>Tech firm</i>	-0,418***	-0,416***	-0,369***	-0,367***	-0,164***	-0,165***
<i>Syndicate</i>	0,105	0,125	0,080	0,089	-0,021	-0,025
<i>Underpricing</i>	0,181*	0,185*	0,109	0,105	-0,035	-0,039
<i>VC affiliation</i>	-0,090	-0,072	0,048	0,060	0,023	0,020
1991-1998	--	--	--	--	0,035	0,035
1999-2000	-0,157	-0,170	-0,106	-0,113	--	--
2001-2005	-0,204	-0,197	-0,065	-0,061	-0,127***	-0,128***
<i>France</i>	-0,163	-0,096	-0,138	-0,136	0,094*	0,093*
<i>Germany</i>	0,095	0,169	--	--	--	--
<i>England</i>	--	--	-0,064	-0,108	0,114**	0,128**

**Table 7 (Continued)**

Definition of regression variables :

<i>Previous analyst activity</i>	Dummy variable equals 1 if financial analyst issued a recommendation on another IPO for previous one month as affiliated and 0 otherwise.
<i>Affiliation</i>	Dummy variable equals 1 if financial analyst is affiliated (Model 1). Dummy variable equals 1 if IPO was covered by both affiliated and unaffiliated analysts and 0 if IPO was covered by unaffiliated analyst only (Model 2).
<i>Favorable</i>	We test the interaction between the characteristics of analysts (whether or not analysts are affiliated) and the nature of recommendations. This variable is 2 for 'strong buy' recommendations, 1 for 'buy', and 0 for 'hold', 'underperform' and 'sell' issued by affiliated analyst.
<i>Timing</i>	Trading days from IPO date to recommendation. It takes the value of 1 (2 and 3) for recommendation made within the first (second and third) year after the offering.
<i>Dispersion</i>	It represents the natural logarithm of the standard deviation of analysts' recommendations within one, three and five-year following IPO
<i>Coverage</i>	Dummy variable equals 1 if the number of coverage is above the median level and 0 otherwise.
<i>Tech firm</i>	Dummy variable equals 1 if IPO firms are technology firms, 0 otherwise.
<i>Syndicate</i>	Dummy variable equals 1 if the number of managing underwriters is above the median level and 0 otherwise.
<i>Underpricing</i>	Dummy variable equals 1 if IPOs have initial return above the median level and 0 otherwise.
<i>VC affiliation</i>	Dummy variable equals 1 if venture capitalists are affiliated to IPOs at the time of the offering and 0 otherwise.
<i>1991-1998</i>	Dummy variable equals 1 if recommendation is issued during the 1991-1998 period.
<i>1999-2000</i>	Dummy variable equals 1 if recommendation is issued during the 1999-2000 period.
<i>2001-2005</i>	Dummy variable equals 1 if recommendation is issued during the 2001-2005 period.
<i>France</i>	Dummy variable equals 1 if recommendation is issued on IPO that went public on French market.
<i>Germany</i>	Dummy variable equals 1 if recommendation is issued on IPO that went public on Deutsch market.
<i>England</i>	Dummy variable equals 1 if recommendation is issued on IPO that went public on English market.