IPO Underpricing and Conflict of Interest inside the Intermediation Structure

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Abstract

This paper examines the role of financial advisors in IPO transactions in alleviating the conflict of interest arising in part of underwriters, a cause of IPO underpricing. Financial advisors are mandated to completing IPO transactions and could be either affiliated to or independent from the lead-underwriters. From the sample of 311 IPO transactions from 1993 to 2010 in the Stock Exchange of Thailand, the average underpricing or initial (first day) return is around 17%. Importantly, it is found that having the financial advisor independent from the underwriters, an IPO issue is less underpriced with 8.7% lower initial return on average. This effect of different intermediation structure on IPO underpricing affirms the view that conflict of interest inside investment banks is a cause of underpricing.

I. Introduction

There has been a bulk of research in the venue of initial public offerings (IPOs), and among others, they have commonly documented that IPOs are underpriced. Often, it can be observed that stocks issued in primary markets are priced lower than their prices traded and revealed in secondary markets. For example, Ritter (1984) documented that IPOs are underpriced about 18.8 percent in the US. In Hoberg (2007) with a more recent data, the number is found to be 22.7%. Similarly for emerging markets, Chinese market has an average underpricing of 948.6% as reported in Su and Fleisher (1999) for 308 IPOs listed on the Shanghai Stock Exchange for period of 1987-1995. Allen et al. (1999) also found the initial return of 63.49% for 150 IPOs of the Stock Exchange of Thailand from 1985 to 1992. This paper relates the intermediation structure in initial public offerings (IPOs) to the main research stream of IPO underpricng, perceivably the main cost of IPO transactions for issuers.

A convincing explanation for the IPO underpricing is the conflict of interest arising in part of investment banks. These banks are sitting between IPO issuers and investors but seem to give favor to investors at the expense of issuers by means of underpriced IPO shares. Baron and Holmstrom (1980) and Baron (1982) argue that underwriters exploit their superior knowledge of the market and underprice issues to minimize marketing effort and to ingratiate themselves with buy-side clients. Loughran and Ritter (2004) also support the view that underwriters have begun to underprice IPOs strategically to benefit their investor bases. In the existing literature, however, IPO intermediation is treated homogeneously in which the advisory role in IPOs is overlooked or considered a task of underwriters. Frequently, the analysis starts from the IPO offering process. Nevertheless, issuers have to go through a long and harsh pre-offering process which advisory service from financial advisors is generally needed.

Although pointed in literature to have conflict of interest, a closer look at the organizational structure of investment banks is not well explored. This paper gives a direct test on the effect of different structure of IPO intermediation on resulting IPO underpricing. In doing so, IPOs in Thailand serve as the study experiment with a number of IPOs are carried out by financial advisors unrelated to the underwriters. Overall, in the sample 311 IPOs from 1993 to 2010, IPO investment gives the average initial returns of 16.9% or 17.5% if adjusted for market returns. Furthermore, the regression results indicate that having financial advisors affiliated to the underwriters, on average, an IPO has a higher market-adjusted initial return of 8.7%. In other words, IPO transactions carried out by independent financial advisors tend to have a smaller underpricing. Moreover, it is also found that underwriters reputable for giving relatively high initial returns in the recent deals tend to enlarge the IPO underpricing. Generally speaking, independent financial advisors help alleviate the conflict of interest arising in part of underwriters whose interest also lie in their investor relations. Then one may cast doubt on the governance structure of investment banks performing both advisory and marketing role for IPOs.

II. Contribution of Study

This study examines the effect of different structures of IPO intermediation on the cost of IPOs, essentially the IPO underpricing. The independence of advisory unit from sales force should alleviate the investment banks' conflict of interest. The role of financial advisors has been investigated in some corporate finance literature, generally in corporate takeover transactions, but they are subsumed into the underwriters or investment banks. Then, there is a gap in the existing literature where the role of financial advisors has not been analyzed separately from the role of underwriters in IPO transactions. In Thailand, there are a number of IPO transactions performed by financial advisors that are not related to the underwriters. In many cases, independent financial advisors have an active role in approaching prospective issuers and executing IPO deals, including selection of and interaction with underwriters, it is then serving as an interesting onset to study the effect of this different IPO intermediation structure.

The existing literature depicted that underwriters or investment banks have conflict of interest, leading to IPO underpricing. However, a direct test on different institutional arrangements prone to different degrees of conflict of interest is still overlooked. In terms of policy implication, the results from this study may draw a conclusion on the contribution of those independent financial advisors to the market. While they could alleviate the principal-agent problem between issuers and underwriters, independent financial advisors are usually small companies with a small group of financial experts, but with allegedly low reputation and poor certification capabilities. It might be doubtful that they may act as a hired gun bringing in knowingly low quality firms to the market, leading to deeply underpriced IPOs.

III. Literature Review

It is widely documented that initial public offerings are usually underpriced. Underpricing is estimated as the percentage difference between IPO and aftermarket prices, interchangeably the initial return. A comprehensive survey of IPO underpricing is presented by Jenkinson and Ljungqvist (2001) and Ljungqvist (2007). Newly listed

firms are selling their IPO shares, usually through their underwriters, at too low prices in the primary market. It seems common that equity issuing firms are leaving money on the table. In what follows, arguments for IPO underpricing are reviewed with attention to the underwriter's conflict of interest and its poor governance. Exchange of soft dollar commission for IPO allocation, IPO spinning, IPO laddering, and post-IPO research analyst's conflict of interest are the notion of poor practices in investment banking industry in relation to IPOs. Also, IPO institutional settings that have effect on underpricing are briefly discussed.

Conventionally, the central explanation for IPO underpricing is related to informational frictions. Ibbotson (1975) suggests a signaling model where issuers underprice in order to leave a good taste in investors' mouths so that future underwritings from the same issuer could be sold at attractive prices. Leland and Pyle (1977) propose a model that an entrepreneur can signal the firm's quality by retaining a high fraction of ownership. Welch (1989) presents a signaling model which high-quality firms use IPO underpricing to signal the firm's quality and separate themselves from low-quality firms. Rock (1986) illustrates the winner's curse effect and shows that issuing firms have to underprice their IPOs to ease the fear of winner's curse and attract uninformed investors. Benvensite and Spindt (1989) suggest that underpricing is an incentive for truth telling of better-informed investors in IPO bookbuilding. Other arguments for the IPO underpricing may include ownership and control (Brennan and Franks (1997) and Stoughton and Zechner (1998)), lawsuit avoidance (Hughes and Thakor (1992)), tax benefit (Rydqvist (1997)), investor sentiment (Ljungqvist et al. (2004)), and mental accounting of issuers (Loughran and Ritter (2002)).

Given the informational frictions, more recent papers emphasize on the agency problem and conflict of interest arising in part of underwriters. Ritter and Welch (2002) conclude in their survey of IPO literature that future research progress will come from non-rational and agency conflict explanations, instead of asymmetric information. Though underwriters are mandated by issuers to place IPO shares, they may not behave in the best interest of the issuers by underpricing the shares. Baron (1982) suggests that underpricing eases the underwriters' task of selling IPO shares to investors, as the marketing cost is reduced. They deliberately underprice the offerings expending less effort to market the new issues and to favor their buying clients. Accordingly, Michaely and Shaw (1994) find that larger offerings require greater distribution effort by the underwriter and thus greater underpricing.

Exchange of soft dollar commission for IPO allocations is a poor practice of investment banks, leading up to conflict of interest and IPO underpricing. Loughran and Ritter (2002) argue that underpricing encourages rent-seeking in IPO allocation. Underwriters can receive benefit in the form overpaying commission from potential IPO investors who are trying to get allotment of hot IPOs. The willingness of buy-side clients to generate commissions by sending trades to underwriters depends on the amount of money left on the table in IPOs. Underwriters therefore have an incentive to underprice IPOs if they receive commission business in return for leaving money on the table. Reuter (2006) find a positive relationship between underpriced IPO holdings of mutual fund families and the level of commission paid to the lead underwriters. The kickback gives underwriters incentive to lower offering prices and leads to principal-agent conflict with the issuers. Hoberg (2007) construct a model and provide empirical evidence of quid pro quo arrangement between the investment bank and investors where the initial returns are the favor given to

IPO investors. In addition, past records of initial returns are provided as an important measure of reputation of an investment bank.

Aside from the exchange of soft dollar commission, poor governance of investment banks in IPOs may relate to IPO spinning, IPO laddering, and analyst's conflict of interest. In connection with IPO spinning, Loughran and Ritter (2004) find that more prestigious underwriters are associated with higher underpricing. This is because allocations of hot IPOs to the personal brokerage accounts of issuing firms' executives create an incentive to seek rather avoid underwriters with a reputation for severe underpricing. Liu and Ritter (2012) document that spinning IPOs has 23% initial returns higher than similar IPOs. Also, issuing firms with spinning IPOs are less likely to switch the investment banks in post-IPO transactions. Put differently, IPO spinning is a form of side payments to the executives for getting future investment banking mandates. IPO laddering refers to allocation of IPO shares to investors who commit to buy additional shares in the aftermarket. Hao (2007) shows that such a tie-in agreement, perceivably a form of price manipulation, reduces the underwriters' cost of price support. Furthermore, rent-seeking investors could share the laddering-enhanced profits with underwriters in exchange for receiving underpriced IPO allocations. Fjesme (2012) finds an evidence of IPO laddering in Oslo Stock Exchange. The relationship between IPO allocations and aftermarket purchases is even stronger when investors sell the shares shortly after listing and when IPOs give positive initial returns. Laddering investors make profit and receive more IPO allocations by paying high brokerage commissions to lead underwriters. The analyst lust hypothesis is examined by Cliff and Denis (2004), which post-IPO analyst coverage is bundled with IPO underwriting service. IPO issuers eagerly pay for the analyst coverage by IPO underpricing, incurred benefit to underwriters via soft dollar commission from IPO investors. Furthermore, they find that IPO firms are more likely to switch underwriters in subsequent offerings if underwriters do not deliver the expected analyst coverage.

Despite the above mentioned agency problems, some institutional settings are found to impact the degree of underwriter's conflict of interest. Muscarella and Vetsuypens (1989) provide a test of Baron's (1982) prediction by looking at self-underwritten IPOs of investment banks. In this setting, there should be no agency problem because issuing banks are the underwriters. Based on 38 IPOs of investment banks, it is however found that their amount of underpricing is quite the same as other IPOs. Similarly, equity stake in the issuing firms held by investment banks, probably via their venture capital arms, should alleviate the conflict of interest. Ljungqvist and Wilhelm (2003), with a quite larger sample size, find a support to this prediction with the negative relationship between investment bank equity holdings and underpricing. Other variations in IPO intermediation structure that can affect the price of offered securities may include quality of auditors, lending banks serving as the underwriters, and financial advisors serving as the underwriters. Titman and Trueman's (1986) model posits that issuers who wish to disseminate favorable financial information to their potential investors would be willing to pay the prestigious auditors whereas issuers with less favorable information to release to the public would most likely find it not worthwhile to pay the cost of a high quality auditor since the auditor's revealed information would be less favorable. Therefore, the quality of the auditor chosen can be a signal to investors and affect the price of securities. Puri (1996) argues that lending banks

when serving as underwriters have informational advantage about the issuing firms and this advantage could lead to conflict of interest as well as certification effect in corporate bond and preferred stock offerings. Given the informational advantage, lending banks can well certify the firm values to investors. With conflict of interest, lending banks may misuse the information and, for instance, exploit investors by using the proceeds to repay their loan outstanding. It is evident that lending banks have net certification effect as investors are willing to pay higher prices for securities underwritten by banks rather than investment houses. Also, in-house department of lending banks, perceivably more prone to conflicting interest, do not underwrite securities with different prices from that of affiliates of lending banks. Allen and Dudney (2010) examine the municipal bond market and find that higher quality of financial advisors are associated with lower yields of newly issued bonds. Moreover, they also find that having the same firm serves as both financial advisor and underwriter increases in yields of negotiated and competitive municipal issues.

IV. Advisory Role and IPO Intermediation Structure

In a bulk of literature, the role of financial advisors in IPOs is not emphasized or not distinguished from the role of underwriters, perhaps because of difference in the interest of study or in the regulatory context. It is worth to briefly review the advisory role and its importance in IPO transactions. In this section, advisory role and IPO process are discussed. Typical structure of investment banks is analyzed in respect to the agency conflict. Lastly, another intermediation structure less prone to the conflict of interest is motivated.

An IPO transaction is a long and enduring process in which many players have to involve the transaction with their specific responsibilities. IPO is considered probably the most important moment in a corporate life and it happens only once. Therefore many companies are not skillful for their IPOs. Financial advisors can walk them through this important and complicated step. To win an advisory mandate, they have to present the whole plan of IPO, including initial thoughts on valuation and capital structure, investment and selling story, and structure of offering and distribution. As described in Geddes (2003), the role of financial advisors may start since pitching for the advisory mandate. Along the IPO process, they have to develop the structure of offering; help to appoint other participants such as solicitors, underwriters, public and investor relations advisors, depository bank and registrars; coordinate all aspect of the issue with other parties, including research analysts, sales department, back office, investor relations, financial printers, and regulators; lead the drafting of documentation; organize the due diligence and verification process; and frequently is the primary underwriter.

In a different context, such leading banks might be called differently, such as lead managers, bookrunners, or global coordinators. In the UK-style markets, the financial advisors in the approved list of the authorities is legally called sponsor, responsible for sponsoring the company in its IPO application to the regulator and the stock exchange. Similarly, in Thailand, financial advisors have to sign off the registration document with the Securities and Exchange Commission. Such financial advisors as well as their advisory companies have to be licensed by Thailand's SEC. Securities companies, perhaps together with their subsidiaries, usually hold both securities underwriting and financial

advisory licenses, in addition to their brokerage license. Still, a number of advisory companies are formed by a small group of high-profile bankers and independent from securities companies such that they can provide only the advisory service, not the underwriting and brokerage services.

For typical investment banks, especially in the US, financial advisors or lead managers are usually a unit of investment bank, called Corporate Finance or Equity Capital Market (ECM), primarily responsible for the advisory role as well as taking the coordinating role within and outside the bank in an IPO transaction. Corporate Finance or ECM professionals work closely with relationship managers, syndicate desk, and equity sales and research. For market integrity, they are located separately from the equity sales and trading desk and usually in a restricted access area behind the so called "Chinese Wall.' Not only the physical area but also procedures, systems, and management are set to separate them from other members of the bank, especially those have daily contact with investors. To well provide advisory service, the financial advisory team must receive information about the markets, investors' attitudes, and so on from research analysts, equity sales, and those in contact with markets and investors. But the reverse flow of information should not be allowed as illustrated below. In particular, there could be a specific team taking role of controlling this information flow and balancing the interest among relevant parties. Geddes (2003) describes that Corporate Finance and ECM people deal primarily with the company and develop ongoing relationship with the issuer. Salesmen and research analysts maintain their primary relationship with investors. Sitting between the two groups-literally in many large banks- is the syndicate desk. The syndicate desk do not develop relationships outside the bank and it is where the interests of the issuer, as represented by the advisory team, must be balanced with those of investors, represented by the sales force.

Figure 1: Conflict of interest inside the intermediation structure
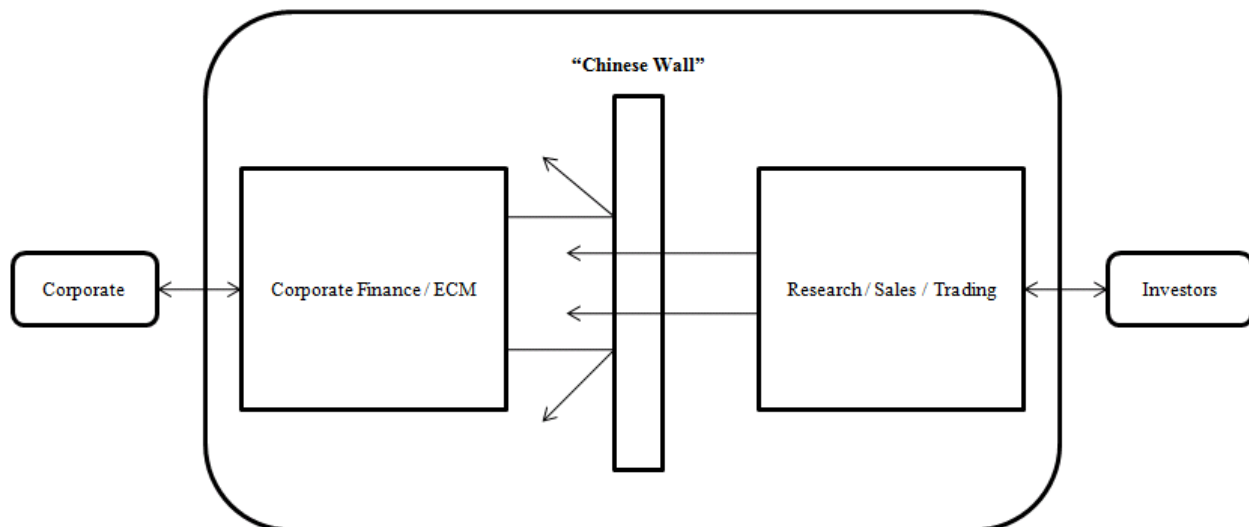
As mentioned, financial advisors work towards the interest of issuing firms. They receive fee-based compensation from the issuers and are likely to be chosen for advisory role in other post-IPO transactions, ranging from regular information disclosures to mergers and acquisitions. Because underpriced IPOs are costly to issuers, financial

advisors, with their capacity of deal manager including selection of underwriters and price setting advisory, are supposed to underplay this cost. However, it is often that financial advisors assume the underwriting role and thus they are subject to the conflict of interest. Ljungqvist (2007) recaps that investment banks that underprice too much lose business from issuers while those underprice too little lose business from investors.

The above illustration of governance structure inside an investment bank is supposed to address the conflict of interest that could arise in the bank. However, IPO underpricing is widely documented in the literature and particularly the recent ones have pointed to the conflict of interest arising in part of the investment bank as the cause of IPO underpricng. Then again, it is possible that a variation in the structure of IPO intermediation could alleviate the investment banks' conflict of interest. One way to address this problem is to set up a separate entity with only the advisory team, taking care solely of the corporate finance business. That separate entity could be an independent company typically setup by experienced bankers and licensed by the regulator to be a financial advisor. A small group of people from relevant professionals such as investment banking, auditing, and consultancy may accumulate expertise and business connections along their careers enough for entering the business by setting up their own company and applying for the financial advisor license from the regulator. With their expertise and business acumen, these people might be able to compete with larger investment banks for the advisory business. It is pointed out in Goddes (2003) that reputation does not mean attention where a well-known bank may not give small companies as much attention as a less well known investment bank and, moreover, the senior bankers from a well-known bank who roll in and pitch for the deal are frequently not involved with the deal on a day-to-day basis. The company should then look for the expertise of individual bankers assigned to the deal.

Testable Hypothesis

Financial advisors are mandated to carry out IPO transactions by issuers. They have to get involved in the deal since the very beginning. Their basic functions include initial thought on valuation, due diligence and documentation, procurement of other players, providing inputs for IPO pricing, and other tasks in post-IPO. From their scope of work, they are sometimes called lead managers or sponsors or lead arrangers or book-runners or alike. Their scope of work may and may not include underwriting service, depending on their underwriting capabilities. Usually for the advisory service, they receive fixed fee, possibly with retention and success fees. As mentioned in previous section that they are well representing issuers rather than investors, they try to contribute to less underpriced IPOs, especially if they are independent from underwriters.

First, it is observable that independent financial advisors do not have brokerage business and investor base. Unlike underwriters, underwriters highly involve in allocation of IPO shares and may use underpricing to laddering their business relationships with investors. They may receive in-kind benefits or quid pro quo arrangement from their underpriced IPO allocation to some investors. These benefits can be then internally shared or shadowed to their affiliated advisory team. However, independent financial advisors do not receive such benefits from investors but they rather rely on the fixed fee received from issuers. On the other hand, independent financial advisors can use less

IPO underpricing to laddering their business relationships with issuers, particularly for other post-IPO deals such as asset sales and acquisitions, mergers and acquisitions, and other securities offering.

Secondly, financial advisors perform valuation for issuers and provide valuation inputs to other parties. The process of IPO may begin with mandating a financial advisor who has to provide initial thought on valuation for issuers. During the pitching period they may use public information and ask for some information from the management to perform their initial valuation. Once they get mandated, they perform due diligence on many aspects of the issuing company and prepare documentation for relevant parties such as regulators and prospect investors. Given their advantage of information production and valuation about the issuing company, they and together with issuers could be in a very good position in communication and negotiation about value of the firm (or even in allocation of IPO share because issuers, together with underwriters, usually have some discretion over the allocation.) Particularly if they are not affiliated to underwriters or the Chinese wall between them is very effective, then issuers could achieve a better deal with a lower underpricing.

In summary, independent financial advisors do not have investor base and their compensation is tied to the fixed fee from the issuers while less underpricing may ladder their business relationships with issuers. Also, their tasks on information production and firm valuation can give advantages to them and issuers in communication and negotiation of the firm value.

V. Research Methodology

In this section, key variables and the regression model are proposed to test the effect of different intermediation structure on IPOs underpricing.

Measure of IPO Underpricing

In this study, underpricing or first-day initial return is measured as a market-adjusted return on the IPO shares. It is then the difference between the raw initial return and its corresponding market return and thus defined as follows.

$UP = UP_{raw} - R_m$ where $UP_{raw} = (P_1 - P_0)/P_0$ and $R_m = (I_1 - I_0)/I_0$ and

P_0: IPO's offer price

P_1: Closing pricing on the 1st day of trading.

I_0: Market index on the day of Offering

I_1: Market index on the 1st day of trading.

IPO Underpicing Model

As guided by previous literature, an underpricing model might be expressed with a set of control variables. Below control variables aim to capture the risk profile related to the IPO issue, the issuing company, and the market conditions of an IPO transaction. In general, the signs of coefficients of these control variables are expected to show the association of higher risk with higher initial return (larger underpricing.)

PROC: Log of size of proceeds raised in the IPO as indicated in the filing document.

OVERHANG: Shares retained by the entrepreneur in proportion to the total shares.

DTT: Number of days from the last subscription date to the trading date.

AGE: Age of the company on the IPO date as the year difference between the establish date and the IPO date.

ASSET: Log of pre-IPO total assets of the issuing company.

LEV: Pre-IPO debt-to-equity ratio.

STD: Standard deviation of daily aftermarket returns estimated over a 30-trading day period after inception of the market trading.

PRIOR: Average of initial returns of other 5 IPOS recently issued prior to the IPO date.

MKTSTD: Standard deviation of daily returns on the index estimated over a 30-trading day period before the market trading date.

UWRREM: Underwriter premium, measured by the lead underwriter's average abnormal initial returns for the recent 5 IPOs led by that underwriter where the abnormal initial returns are the initial returns less PRIOR.

MAI: indicator variable for listing on the small board (namely MAI.)

The first three variables, PROC, OVERHANG, and DTT, are related to the issue characteristics. As smaller offerings are more speculative, on average, than larger offerings and a larger portion of shares retained by the entrepreneur is signaling a higher quality of company (Bradley and Jordan, 2002), PROC and OVERHANG should have negative signs of coefficients. DTT variable is unique to Asian IPOs where IPO investors have to pay for their IPO share subscription and wait for many days to the trading date. As described in Chen et al. (2005) that the length of the period from the IPO subscription to the trading date shows the quality of coordination and operation of the IPO transaction and concluded that it is negatively correlated with the IPO return. However, in Chowdhry and Sherman (1996), it is argued that in the U.K. and most Asian countries, the issuers receive interest float on the subscription funds and this revenue gives an incentive to underprice the offering.

The next four variables, AGE, ASSET, LEV, and STD, are related the issuing company. Older, larger and lower leverage are perceived as less risky and having lower return. Thus AGE and ASSET should be negatively correlated

with the underpricing while LEV should be positively correlated. The STD is meant to capture the ex-ante uncertainty of the issuing company and thus positively correlated with the underprcing but the market data is available only after the trading date and used as a proxy that ex-ante uncertainty. The next two variables, PRIOR10 and MKTSTD, are related to the prevailing market conditions. Ibbotson and Jaffe (1975) first document autocorrelation in average initial returns and thus it has the expectedly positive sign of coefficient. Similarly for the MKTSTD, higher uncertainty in the market should result in a higher underpricing.

To control for the underwriter reputation, underwriter premium, UWPREM, is included in the model among other proxy for the reputation. This is because underwriters tend to keep their reputation of giving high initial returns on IPOs, as suggested in Hoberg (2007). In addition, stock listing on the main board seems to be less risk and thus a dummy for listing board is included. MAI is a dummy variable for listing on the small board, namely Market for Alternative Investment, and has the value of 0 when listing on the main board and 1 for otherwise. To meet the object of this study, the sample is split by a conflict of interest variable to see the effect of financial advisor independence on the magnitude of underpricing. In this study, IFA is a dummy variable for the conflict of interest in IPO intermediation and has the value of 1 when the financial advisor is independent from the underwriter in a given IPO transaction and 0 for otherwise. Together with the above list of control variables, the following regression model is estimated.

$$UPMKT = C + b_1 IFA + b_2 PROC + b_3 OVERHANG + b_4 DTT + b_5 AGE + b_6 ASSET + b_7 LEV + b_8 STD + b_9 PRIOR + b_{10} MKTSTD + b_{11} UWPREM + b_{12} MAI + e$$

where C and e is the intercept and error terms.

Hypothesis Testing

The effect of financial advisor independence on the IPO underpricing is an empirical question. However, if it is believed that independent financial advisors can give some balance to the conflicting underwriters, then a lower undepricing may be expected in the transactions performed by independent financial advisors. On the other hand, with higher certification capabilities of underwriters, then larger underpriced IPOs carried out by independent advisors may be expected. As a result, a positive coefficient of IFA is expected in the former case while a negative one in the latter case.

Data Collection

The sample firms in this study are those listed companies in Thailand, both on the main (SET) and small (MAI) boards. Information about the relevant parties and IPO details can be hand-collected from the IPO prospectuses, formally the form 69-2, accessible from the internal database at the library of Securities and Exchange Commission, Thailand. The relevant series of financial data can also be hand-collected from the prospectuses and found in an electronic database, called SETSMART provided by the Stock Exchange of Thailand. Thailand's SEC was separated from the Stock Exchange of Thailand in 1992, then became the supervisory body in the capital markets and assumed

the role of securities registration. During the early days of establishment of Thailand's SEC, the prospectuses and information regarding IPOs were not consistently maintained at its library. Consequently, the sample in this study starts from 1993 and some observations are missing due to lack of information availability.

VI. Empirical Results

In this section, empirical results are shown. It includes descriptive statistics of the variables, regression analysis with various specifications, selection model, and some robustness checks. Overall, the results show that having financial advisors independent from underwriters decreases the amount of IPO underpricing.

Table 1 shows characteristics of IPO transactions and initial returns in the sample of 311 IPOs in the Stock Exchange of Thailand from 1993 to 2010. In general, the sample IPOs are moderately underpriced with the average initial returns around 17%. However, it is documented with relatively large standard deviations and wide range of values. The highest initial return is 172% while the lowest is -53%. IPO issues have the average size of proceeds of THB 875 million, or about USD 29.17 million. The existing shareholders retain about 77% of the company ownership. IPO investors have to tie up their subscription funds on average for 31 days. When sorted by IPO dates, the more recent IPOs are better executed with shorter fund subscription days.

Issuing companies have been established for 14 years on average at the time of IPO. However some companies have been through a series of corporate transformation and may reset the establishment date along the way. Issuers are entering the IPO transactions with their asset size of THB 4,115 million, or roughly USD 137 million, and debt-to-equity ratio of 2.39. As a proxy for the company uncertainty, the average daily volatility for 30 days after the first trading date is about 3.72%.

Prevailing initial return in the IPO market, measured by the average initial returns of the most recent 5 IPOs prior to the IPO date, is about 19%. For the market uncertainty, the 30-day average daily volatility before the first trading date is about 1.22%. The average of UWPREM is close to zero, neither premium nor discount initial returns relative to the prevailing initial returns, but it has a fairly large standard deviation and wide range of values.

Table 1: Descriptive statistics of the variables.

Variables	N	Mean	Median	S.D.	Max	Min
Initial Return						
UPRAW	311	0.1691	0.0588	0.3306	1.7273	-0.5333
UPMKT	311	0.1750	0.0712	0.3230	1.8902	-0.2819
Issue						
PROC	311	875	315	2,268	26,250	19
OVERHANG	311	0.7676	0.7700	0.0624	0.9000	0.4100
DTT	311	30.80	12.00	37.68	229.00	4.00
Issuer						
AGE	311	14.31	12.00	9.53	58.00	0.00
ASSET	311	4,115	1,071	17,248	263,055	11
LEV	311	2.39	1.57	2.85	24.86	0.03
STD	311	0.0372	0.0325	0.0274	0.4281	0.0101
Market Condition						
PRIOR	311	0.1918	0.1130	0.2934	2.1620	-0.3357
MKTSTD	311	0.0122	0.0110	0.0045	0.0380	0.0055
Underwriter Reputation						
UWPREM	311	-0.0074	-0.0440	0.3931	4.0479	-1.1274

UPRAW is raw initial return and defined as $UPRAW = (P_1-P_0)/P_0$ where P_0 is the IPO's offer price and P_1 is the closing pricing on the first day of trading. UPMKT is market-adjusted initial return and defined as $UPMKT = UPRAW- R_m$ where $R_m = (I_1-I_0)/I_0$ and I_0 is the market index on the last day of offering and I_1 is the market index on the first day of trading. PROC is log of size of proceeds raised in the IPO as indicated in the filing document. OVERHANG is the shares retained by the entrepreneur in proportion to the total shares. DTT is number of days from the last subscription date to the trading date. AGE is the age of the issuing company on the IPO date as the year difference between the establish date and the IPO date. ASSET is log of pre-IPO total assets of the issuing company. LEV is pre-IPO debt-to-equity ratio. STD is the standard deviation of daily aftermarket returns estimated over a 30-trading day period following the first day of trading. PRIOR is the average of initial returns of other 5 IPOs recently issued in the market prior to the IPO date. MKTSTD is the standard deviation of daily returns on the index estimated over a 30-trading day period before the first day of trading. UWPREM is the underwriter premium, measured by the lead underwriter's average abnormal initial returns for the recent 5 IPOs led by that underwriter where the abnormal initial returns are the initial returns less PRIOR.

It is not necessary that financial advisors are mandated or capable to underwrite IPOs. From the total sample of 311 IPOs, there are 53 IPOs carried out by financial advisors who are not affiliated to the underwriters. These IPOs are marked with 1 for the value of IFA variable. Different IPO intermediation structures have impact on the level of underpricing as shown in Table 2. Mean and median initial returns of IPOs completed by affiliated financial advisors are 19.19% and 7.68%, respectively. Still, independent financial advisors give significantly lower mean and median initial returns, at 9.23% and 5.69%. In other words, the average amount of underpricing decreases by 9.96% if

financial advisors are not affiliated to the underwriters. Given the average IPO size of USD 29.17 million, this conflict-free intermediation structure can save about USD 2.9 million of the issuer's money left on the table.

Table 2: Intermediation structure and IPO underpricing.

IFA	N	Mean	Median	S.D.	Max	Min
		Market-adjusted initial returns				
0	258	0.1919	0.0768	0.3370	1.8902	-0.2819
1	53	0.0923	0.0569	0.2285	0.8474	-0.2119
All	311	0.1750	0.0712	0.3230	1.8902	-0.2819
Anova F-test		4.2262	(0.0406)			
Mann–Whitney–Wilcoxon		1.8088	(0.0705)			

p-values in the parentheses

IFA is a dummy variable for the conflict of interest in IPO intermediation and has the value of 1 when the financial advisor is independent from the underwriter in a given IPO transaction and 0 for otherwise.

As mentioned, IPOs with independent financial advisors have lower amount of underpricing. Table 3 also shows a negative correlation coefficient between IFA and initial returns as well as correlations of other variables. It shows that smaller amount of underpricing significantly correlates with independence of financial advisory, larger size of asset, less company and market uncertainties, and lower prevailing initial returns in the market. Aside from the intermediation structure, it supports that initial returns compensate for riskiness of the issuers and the market. Also, if high initial returns prevail in the market, subsequent IPOs tend to follow suit.

Table 3: Correlation among variables.

Correlations	UPMKT	IFA	PROC	OVER HANG	DTT	AGE	ASSET	LEV	STD	PRIOR	MKTSTD	UW PREM	MAI
UPMKT	1												
IFA	-0.1162	1											
	(0.0406)												
PROC	0.0139	-0.0541	1										
	(0.8065)	(0.3413)											
OVERHANG	-0.0547	0.0466	0.0802	1									
	(0.3362)	(0.4129)	(0.1584)										
DTT	-0.0568	-0.0667	0.1772	0.0556	1								
	(0.3182)	(0.2411)	(0.0017)	(0.3281)									
AGE	0.0559	-0.0436	-0.0519	0.0671	-0.0030	1							
	(0.3256)	(0.4432)	(0.3615)	(0.2378)	(0.9587)								
ASSET	-0.1044	0.0128	0.7195	0.2395	0.0678	0.0708	1						
	(0.066)	(0.8228)	(0.0000)	(0.0000)	(0.2335)	(0.2129)							
LEV	-0.0477	-0.0276	0.1574	-0.0789	0.1914	0.0933	0.3632	1					
	(0.4022)	(0.6274)	(0.0054)	(0.1653)	(0.0007)	(0.1004)	(0.0000)						
STD	0.3561	0.0246	-0.1599	-0.0721	-0.1254	-0.0026	-0.1419	-0.0975	1				
	(0.0000)	(0.6657)	(0.0047)	(0.2045)	(0.027)	(0.963)	(0.0123)	(0.0859)					
PRIOR	0.3351	-0.0377	0.0816	0.0920	0.0542	0.0031	0.0511	-0.0233	0.0528	1			
	(0.0000)	(0.5073)	(0.1512)	(0.1056)	(0.3408)	(0.9564)	(0.3687)	(0.6825)	(0.353)				
MKTSTD	0.0933	-0.0006	0.0435	-0.1219	0.1051	0.0302	-0.0291	-0.0225	0.0729	0.2737	1		
	(0.1005)	(0.9921)	(0.4447)	(0.0316)	(0.0641)	(0.5956)	(0.6087)	(0.6928)	(0.1999)	(0.0000)			
UWPREM	0.0905	-0.0154	0.0595	-0.0682	-0.0056	0.0052	0.0224	0.0675	0.0017	-0.0742	-0.0172	1	
	(0.1113)	(0.7873)	(0.2955)	(0.2307)	(0.9218)	(0.927)	(0.6942)	(0.2353)	(0.9762)	(0.1917)	(0.7628)		
MAI	0.0358	0.0745	-0.6058	-0.0786	-0.2683	0.0338	-0.4669	-0.1590	0.1073	-0.0539	0.0625	0.0062	1
	(0.5296)	(0.1900)	(0.0000)	(0.1668)	(0.0000)	(0.5527)	(0.0000)	(0.0049)	(0.0588)	(0.3439)	(0.2716)	(0.9128)	

p-values in the parentheses

Independence of financial advisory negatively correlates with initial returns. Another step is to compare other characteristics of IPOs with and without independent advisors. Table 4 describes key statistics of the sample IPOs classified by the intermediation structure. On average, IPOs with independent financial advisors have shorter fund subscription period, smaller size of asset, lower leverage, lower initial returns prevailing in the market, and smaller underwriter's premium. Also, the lower panel of Table 4 shows that IPOs listed on the small board, namely MAI, give a higher average initial return. Nevertheless, all variables are not statistically different for different intermediation structures.

Table 4: Intermediation structure and other IPO characteristics.

Variables	IFA=0			IFA=1			Mean Equality		Median Equality	
	Mean	Median	S.D.	Mean	Median	S.D.	F-test	p-value	MWW	p-value
Issue										
PROC	869	341	2362	905	259	1762	0.0115	0.9148	1.4130	0.1577
OVERHANG	0.7662	0.7700	0.0618	0.7740	0.7800	0.0658	0.6721	0.4129	0.5085	0.6111
DTT	31.93	12.00	39.36	25.26	11.00	27.74	1.3794	0.2411	1.0849	0.2780
Issuer										
AGE	14.50	12.00	9.43	13.40	10.00	10.01	0.5894	0.4432	1.4331	0.1518
ASSET	4295	1059	18744	3237	1075	6010	0.1651	0.6847	0.1082	0.9139
LEV	2.42	1.60	2.97	2.21	1.51	2.22	0.2361	0.6274	0.0562	0.9552
STD	0.0369	0.0325	0.0289	0.0387	0.0323	0.0188	0.1870	0.6657	0.4503	0.6525
Market Conditions										
PRIOR	0.1968	0.1123	0.3041	0.1674	0.1194	0.2355	0.4407	0.5073	0.1493	0.8813
MKTSTD	0.0122	0.0110	0.0045	0.0122	0.0108	0.0045	0.0001	0.9921	0.2172	0.8281
Underwriter Reputation										
UWPREM	-0.0046	-0.0431	0.4146	-0.0207	-0.0577	0.2669	0.0729	0.7873	0.4134	0.6793

Small Board		Market-adjusted initial returns				
MAI	N	Mean	Median	S.D.	Max	Min
0	244	0.1689	0.0716	0.3183	1.8902	-0.2819
1	67	0.1970	0.0681	0.3410	1.2153	-0.2188
All	311	0.1750	0.0712	0.3230	1.8902	-0.2819
Anova F-test		0.3960	(0.5296)			
Mann-Whitney-Wilcoxon		0.0138	(0.9890)			

p-values in the parentheses

The sample of this study comprises of 311 IPOs over 18 years from 1993 to 2011. Table 5 shows the distribution of IPOs and average underpricing in each year. IPO activities seem to follow the economic cycles with troughs in 1997 Asian financial crisis and 2008 credit crunch. The peak in early 1990's coincides with the period of liberalized capital account and surge of capital inflows. The devaluation of Thai Baht and subsequent Asian financial crisis in 1997 shut down the IPO market. Along with the phase of economic recovery after the millennium, the IPO market became more active. Concurrently, the Stock Exchange of Thailand (SET) had progressively weakened its listing requirements and Thai government promoted IPO activities by lowering corporate income tax rate from 30% to 25% for the first five years after listing on the market. In 2004 and 2005, issuing firms were rushing for the tax incentive which was ended by 2005 where the IPO market had reached the peak. Then the credit crunch in 2008 had slowed down the market but the impact was far less than that of the 1997 crisis. Over the sample period, it can be seen that independent financial advisors have consistently carried out IPOs over. Frequently, they carried out IPOs with lower level of underpricing.

Table 5: IPO distribution and average underpricing.

Year	All no. of IPOs	All Underpricing	IFA = 1 no. of IPOs	IFA = 1 Underpricing
1993	3	56.95%	0	-
1994	34	23.13%	5	5.48%
1995	25	16.73%	5	-3.51%
1996	31	7.25%	2	1.73%
1997	3	-7.00%	1	1.08%
1998	1	7.65%	1	7.65%
1999	-	-	-	-
2000	1	-9.90%	0	-
2001	7	10.42%	2	7.59%
2002	22	14.92%	4	8.73%
2003	25	49.96%	2	11.44%
2004	47	14.19%	6	15.54%
2005	46	8.29%	10	-0.41%
2006	17	1.89%	3	7.50%
2007	12	29.71%	2	33.48%
2008	9	12.78%	3	32.21%
2009	17	11.69%	3	0.35%
2010	11	42.14%	4	29.55%
Total	**311**		**53**	

In what follows, regression results are reported. In addition to the baseline models, the results for other specifications are shown. To correct for the endogeneity of advisor choice, the Heckman selection model is applied. Also, changes in definition of some variables are tried for robustness check. Generally, the results indicate that having financial advisors independent from the underwriters, IPOs are less underpriced.

In Table 6, the results of OLS regression of initial returns on the intermediation structure variable (IFA) and control variables are reported for the models with and without controlling for industry and year effects. The coefficients of IFA are negative and significant in both models, indicating the differential effect of different IPO intermediation structure. Among the control variables, STD and PRIOR are performing well as the significant variables in both models. In particular, Table 6 shows that having financial advisors independent from the underwriters, IPOs are less underpriced with 8.28% and 10.21% lower initial returns for the models without and with controlling for industry and year effects, respectively. Given the average proceeds raised at USD 29.17 million, cost-saving from the lower underpricing is translated into USD 2.42 – 2.98 million. Put differently, financial advisors affiliated to the

underwriters prone to conflict of interest tend to carry out IPOs with larger amount of underpricing, more costly to the issuers.

For STD, and PRIOR, the estimation results show that the more IPO underpricing is associated with higher firm uncertainty and higher past initial returns prevailing in the market. From the model with industry and year effects, listing on the small board (MAI) and having shorter days from subscription to trading date (DTT), IPOs have higher initial returns. Investors get higher initial returns for participating in IPOs listed on the small board, perceivably riskier IPOs. Shorter days of fund subscription reduce float revenue to the underwriting banks but it can be compensated by more underpricing. In addition, the positive, but at 10% significance level, coefficient of UWPREM demonstrates the underwriter persistence phenomenon. As suggested in Hoberg (2007), underwriters who are reputable for giving comparatively high initial returns, tend to keep their reputation in their next deals.

Table 6: Regression analysis of intermediation structure and IPO underpricing

OLS	Dependent Variable = Market-adjusted Initial Return (UPMKT)			
	IPO Underpricing Model		with Industry&Year Effects	
	Coefficient	t-Statistic	Coefficient	t-Statistic
IFA	-0.082787	-2.427894 **	-0.102119	-3.039358 ***
PROC	0.066236	1.860543 *	0.019788	0.614367
OVERHANG	-0.053534	-0.143664	-0.354757	-0.857912
DTT	-0.000472	-1.24605	-0.001483	-2.269586 **
AGE	0.002607	1.420005	0.001514	0.799149
ASSET	-0.056843	-2.055167 **	-0.042579	-1.465917
LEV	0.004885	1.019571	0.000399	0.067052
STD	4.001263	3.389608 ***	3.68379	3.397729 ***
PRIOR	0.364488	4.06114 ***	0.428029	5.567539 ***
MKTSTD	-2.724261	-0.867292	-4.064809	-1.274622
UWPREM	0.081017	1.621609	0.082309	1.684025 *
MAI	0.038719	0.790256	0.451784	3.810765 ***
Intercept	0.012635	0.042235	0.047161	0.146619
Industry&Year	No	No	Yes	Yes
Adj R-squared	0.256108		0.3415	
F-statistic	9.893924 ***		5.230717 ***	
N	311		311	

*, **, and *** are 10%, 5%, and 1% significant, respectively.
Reported t-White heteroskedasticity consistent standard errors & covariance.

The regression model is: UPMKT = $C + b_1$IFA + b_2PROC + b_3OVERHANG + b_4DTT + b_5AGE + b_6ASSET + b_7LEV + b_8STD + b_9PRIOR + b_{10}MKTSTD + b_{11}UPPREM + b_{12}MAI + e where C and e is the intercept and error terms. UPMKT is market-adjusted initial return and defined as UPMKT = UPRAW- R_m. UPRAW is raw initial return and defined as UPRAW = $(P_1-P_0)/P_0$ where P_0 is the IPO's offer price and P_1 is the closing pricing on the first day of trading. $R_m = (I_1-I_0)/I_0$ and I_0 is the market index on the last day of offering and I_1 is the market index on the first day of trading. IFA is a dummy variable for the conflict of interest in IPO intermediation and has the value of 1 when the financial advisor is independent from the underwriter in a given IPO transaction and 1 for otherwise. PROC is log of size of proceeds raised in the IPO as indicated in the filing document. OVERHANG is the shares retained by the entrepreneur in proportion to the total shares. DTT is number of days from the last subscription date to the trading date. AGE is the age of the issuing company on the IPO date as the year difference between the establish date and the IPO date. ASSET is log of pre-IPO total assets of the issuing company. LEV is pre-IPO debt-to-equity ratio. STD is the standard deviation of

daily aftermarket returns estimated over a 30-trading day period following the first day of trading. PRIOR is the average of initial returns of other 5 IPOs recently issued in the market prior to the IPO date. MKTSTD is the standard deviation of daily returns on the index estimated over a 30-trading day period before the first day of trading. UWPREM is the underwriter premium measured by the lead underwriter's average abnormal initial returns for the recent 5 IPOs led by that underwriter where the abnormal initial returns are the initial returns less PRIOR. MAI is a dummy variable for listing on the small board, namely Market for Alternative Investment, and has the value of 0 when listing on the main board and 1 for otherwise.

Based on the full specification in Table 6, other specifications dropping out some correlated variables are estimated. Table 7 shows the results from various specifications with and without controlling for industry and year effects. For instance, coefficients of IFA are significant and negative as shown by the simplest specifications in column (1.1) and (1.2) with only IFA variable. In general, coefficients of IFA from various specifications are significant and negative from -0.088381 to -0.101231. It points out that independence of financial advisory reduces initial returns around 8.83 to 10.12%.

Table 7: Various specifications for regression analysis.

OLS	(1.1)	(1.2)	(2.1)	(2.2)	(3.1)	(3.2)	(4.1)	(4.2)	(5.1)	(5.2)
IFA	-0.099619 ***	-0.097263 **	-0.096715 ***	-0.098113 ***	-0.102448 ***	-0.095945 **	-0.088381 **	-0.100809 ***	-0.094192 ***	-0.101231 ***
	[-2.6490]	[-2.0134]	[-2.9001]	[-2.9002]	[-2.7449]	[-2.5670]	[-2.3960]	[-2.7963]	[-2.7696]	[-2.9207]
PROC							-0.002297	-0.037085		
							[-0.1319]	[-1.8792]		
OVERHANG									-0.239600	-0.428110
									[-0.5746]	[-0.9831]
DTT					-0.000588	-0.001665 **				
					[-1.3898]	[-2.0662]				
AGE							0.001841	0.002244		
							[0.8955]	[1.0056]		
ASSET					-0.022335 *	-0.041898 **				
					[-1.6963]	[-2.1783]				
LEV							-0.005275	-0.007180		
							[-1.0446]	[-1.1942]		
STD			4.032943 ***	3.950732 ***					3.955023 ***	3.805545 ***
			[3.5592]	[3.1095]					[3.5613]	[3.3259]
PRIOR			0.344307 ***	0.322303 ***			0.364003 ***	0.353355 ***	0.359679 ***	0.404446 ***
			[3.7648]	[3.6106]			[3.6809]	[3.6372]	[3.8918]	[5.3447]
MKTSTD					6.999583	7.302052				
					[1.3409]	[1.5271]				
UWPREM									0.089700	0.085426 *
									[1.6169]	[1.7159]
MAI									0.016650	0.444331 ***
									[0.4302]	[3.8211]
Intercept	0.191947 ***	0.235234 ***	-0.024473	0.010821	0.281905 **	0.401056 **	0.119967	0.308997 ***	0.156025	-0.097250
	[9.1370]	[4.6312]	[-0.5892]	[0.1617]	[2.3975]	[2.5739]	[1.2179]	[2.7894]	[0.4769]	[-0.2948]
Industry&Year	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Adj R-squared	0.0103	0.0889	0.2398	0.2899	0.0242	0.1200	0.1136	0.2725	0.2402	0.3279
F-statistic	4.2262 **	2.1197 ***	32.2799 ***	5.3630 ***	2.9257 **	2.4097 ***	8.9476 ***	3.3715 ***	17.3376 ***	5.7261 ***
N	311	311	311	311	311	311	311	311	311	311

Dependent Variable = Market-adjusted Initial Return (UPMKT)

*, **, and *** are 10%, 5%, and 1% significant, respectively.
Reported in parentheses: t-White heteroskedasticity consistent standard errors and covariance.

It is common in corporate finance research that variables are endogenous. In this case the choice of intermediation structure might be doubted as endogenous. Firms with certain characteristics may choose affiliated (or independent) financial advisors. Such characteristics may also associate with the level of underpricing. Then this could lead to selection bias once including the choice of IPO intermediation structure into the model. For instance, underwriting banks, typically larger and more reputable than independent financial advisors, are more likely to win financial advisory mandates for big IPOs with large amount of proceeds raised. A remedy for this selection bias is to perform the two-step Heckman correction. First, a probit regression for the choice of IPO intermediation structure is estimated. The inverse Mills ratio is then obtained from the probit regression and added as an explanatory variable in the following two-stage least squared regression. If the coefficient of the inverse Mills ratio is not statistically different from zero, then the null hypothesis that there is no selection bias cannot be rejected.

In particular, floatation or direct cost of IPO is proposed as a variable determining the choice of intermediation structure in first stage probit regression. Having the advisory service from a company different from the underwriter, an IPO transaction practically has one more entity involving in the deal. This then leads to a higher floatation cost comparing to the case that having the same company playing as both advisor and underwriter. Moreover, underwriters may charge lower fees when bundling advisory and underwriting services. The floatation cost is calculated as the difference between the gross and net amount of proceeds from IPOs, or between what investors pay and what issuers receive. The difference goes to all relevant third parties, including regulators, advisors, underwriters, and financial printers.

Floatation Cost = Gross Proceeds − Net Proceeds

Table 8 compares the floatation cost (COST) between IPOs carried out by independent and affiliated financial advisors. In the sample, the average floatation cost of the deals carried out by independent financial advisors is about THB 27.65 million (USD 0.92 million) which is THB 7.44 million (USD 0.25) higher than the case of advisor-turned-underwriter. As mentioned, higher cost of independent advisory represents an additional party involving in the deal and no possibility of service and fee bundling by underwriters.

Table 8: Floatation cost of IPOs

IFA	N	Mean	Median	S.D.	Max	Min
			Floatation Cost			
1	53	27.65	6.82	53.01	261.77	0.99
0	258	20.21	10.59	41.00	567.00	0.75
All	311	21.48	10.27	43.28	567.00	0.75
Anova F-test		1.3013	(0.2549)			
Mann-Whitney-Wilcoxon		1.6394	(0.1011)			

p-values in the parentheses

In general, underwriters, and their affiliated advisory teams, are part of larger and more reputable securities companies providing various securities businesses such as brokerage, underwriting, advisory, and research. It's likely that large-sized IPOs and reputable and integrated investment banks search for each other. Also, many of underwriting banks are subsidiaries or affiliates of commercial banks who probably have connection with the issuing companies. Somehow, large IPO firms tend to connect with underwriting banks and their choice of advisory service depends on the banking relationship. On the other hand, independent advisory companies are typically smaller companies with allegedly lower reputation and poorer certification capabilities. It might be doubtful that their customers are those too risky to be picked up the underwriting banks. Accordingly, other variables determining the choice of financial advisory may include size of proceeds raised (PROC), asset size (ASSET), and uncertainty of the issuing company (STD).

In the first Stage, a selection model for the choice of financial advisors is estimated. That is to estimate the following probit model with the probability of using independent financial advisors (IFA=1) determined by a set of explanatory variables, X, where X includes COST, PROC, ASSET, and STD.

$$Pr(IFA=1|X_i) = \Phi(X_i\delta_2)$$

The coefficients, δ_2, are estimated with the results shown in Table 9. It shows that direct cost, searching for reputation and integrated services, and banking connection are influencing the choice of financial advisor. In particular, higher floatation cost, smaller deal size, and smaller company size tend to associate with the use of independent financial advisor (IFA=1). However, company uncertainty does not come out as a significant factor determining the choice of financial advisor. It does not support the view that independent financial advisors act as a hired gun helping low quality firms to list on the exchange.

Table 9: **Choice of intermediation structure**

Heckman Selection First Stage: Probit	Dependent Variable = IFA IPO Underpricing Model	
	Coefficient	z-Statistic
COST	0.015117	3.7688 ***
PROC	-0.311997	-3.0417 ***
ASSET	-0.000027	-3.4442 ***
STD	0.711056	0.2930
Intercept	0.592887	1.0558
McFadden R-squared	0.0483	
LR statistic	13.7082	
Prob(LR statistic)	0.0083	
N	311	

*, **, and *** are 10%, 5%, and 1% significant, respectively.
Reported z-White heteroskedasticity consistent standard errors and covariance.

From the first-stage probit model, inverse Mills ratio λ(Xiδ2) can be obtained and then included as another explanatory variable in the second stage regression. The estimation results are shown in Table 10. Overall, the results are not much different from what obtained previously. There is no sign of selection bias. Still, different intermediation structures can affect the level of underpricing. Having financial advisors independent from underwriters, IPOs are less underpriced. They reduce initial returns by 9.62% to 11.12%, slightly larger reduction than that estimated from the baseline model in Table 6. This is another way to evidence the conflict of interest inside investment banking business.

Table 10: Intermediation structure and IPO underpricng: Heckman correction

Heckman Selection Second Stage	Dependent Variable = Market-adjusted Initial Return (UPMKT)			
	IPO Underpricing Model		with Industry&Year Effects	
	Coefficient	t-Statistic	Coefficient	t-Statistic
IFA	-0.096197	-2.663349 ***	-0.111875	-3.1926 ***
PROC	0.063728	1.922513 *	0.020188	0.6267
OVERHANG	-0.106951	-0.279218	-0.390536	-0.9264
DTT	-0.000534	-1.445159	-0.001407	-2.1548 **
AGE	0.002762	1.506269	0.001591	0.8463
ASSET	-0.053558	-2.098558 *	-0.041192	-1.4597
LEV	0.005815	1.242382	0.001030	0.1802
STD	3.949815	3.366824 ***	3.670706	3.4364 ***
PRIOR	0.357465	3.957797 ***	0.421999	5.3992 ***
MKTSTD	-2.887079	-0.915212	-4.098280	-1.2801
UWPREM	0.072816	1.631492	0.075827	1.6866 *
MAI	0.016765	0.333629	0.426757	3.7157 ***
Intercept	-0.328802	-0.691051	-0.197478	-0.4148
Inverse Mills	0.421623	0.83103	0.304475	0.6240
Industry&Year	No	No	Yes	Yes
Adj R-squared	0.2582		0.3414	
F-statistic	9.3023 ***		5.1197 ***	
N	311		311	

*, **, and *** are 10%, 5%, and 1% significant, respectively.
Reported t-White heteroskedasticity consistent standard errors & covariance.

In what follows, the baseline regressions in Table 6 are re-estimated with changes in the definition of some variables. The number of previous IPOs used in calculating prevailing initial returns (PRIOR) and underwriter premiums (UWPREM) is changed from 5 to 10 IPOs. Also, the number of days used in calculating volatilities for the IPO stock (STD) and the market index (MKTSTD) is extended from 30 days to 90 days. In general, coefficients

of IFA are still negative and significant. The result again confirms the conflict of interest inside investment banking business which is robust to these changes in variable definition.

In calculating the prevailing initial returns in the market (PRIOR), initial returns from the most recent 5 IPOs are averaged. The resulting PRIOR is used to calculate the underwriter premium (UWPREM) which is measured by the lead underwriter's average abnormal initial returns for the recent 5 IPOs led by that underwriter where the abnormal initial returns are the initial returns less PRIOR. This change should capture a longer time span of prevailing period. Table 11 shows the estimation results with the change from the most recent 5 to 10 deals. Again, the result is not much different from what obtained previously. Particularly, the coefficients of IFA, about 8.71% to 10.08%, are very close to what obtained in the baseline model.

Table 11: Change from the most recent 5 to 10 deals – PRIOR and UWPREM

| OLS | Dependent Variable = Market-adjusted Initial Return (UPMKT) | | | |
| | IPO Underpricing Model | | with Industry&Year Effects | |
	Coefficient	t-Statistic	Coefficient	t-Statistic
IFA	-0.087096	2.447825 **	-0.100844	2.786097 ***
PROC	0.062045	1.661233 *	0.013776	0.415343
OVERHANG	-0.025009	-0.065666	-0.366267	-0.85673
DTT	-0.000465	-1.194072	-0.001351	-1.876823 *
AGE	0.002766	1.328523	0.001788	0.868578
ASSET	-0.049571	-1.752371 *	-0.033182	-1.144246
LEV	0.004257	0.863434	-0.000477	-0.078504
STD	4.067691	3.158514 ***	3.724148	3.118098 ***
PRIOR	0.331442	4.091062 ***	0.414022	4.847281 ***
MKTSTD	-1.052912	-0.299604	-2.398983	-0.731561
UWPREM	0.074484	1.479728	0.082314	1.732063 *
MAI	0.049035	0.964056	0.395689	4.140438 ***
Intercept	-0.142275	-0.453882	-0.031883	-0.094916
Industry&Year	No	No	Yes	Yes
R-squared	0.246314		0.388453	
Adj R-squared	0.215964		0.303016	
F-statistic	8.115838 ***		4.546676 ***	
N	311		311	

*, **, and *** are 10%, 5%, and 1% significant, respectively.
Reported t-White heteroskedasticity consistent standard errors and covariance.

Volatility is a typical proxy for uncertainty and its measurement is subject to the sample period. As the proxy for company's uncertainty, STD is standard deviation of daily aftermarket returns estimated over a 30-trading day period after the market trading. To capture uncertainty prevailing in the market, MKTSTD is measured by standard deviation of daily returns on the market index estimated over a 30-trading day period before the market trading date. Usually, it is less volatile with a longer sample period. Table 12 shows the estimation results with changes in the definition of those variables from 30 to 90 trading days. Again, the results are not much different from what

obtained previously. With independent advisory, IPO initial returns decrease by 7.70% to 9.55%, slightly smaller reduction than that estimated from the baseline model in Table 6.

Table 12: Change from 30 to 90 trading days – STD and MKTSTD

OLS	Dependent Variable = Market-adjusted Initial Return (UPMKT)			
	IPO Underpricing Model		with Industry&Year Effects	
	Coefficient	t-Statistic	Coefficient	t-Statistic
IFA	-0.077034	2.119555 **	-0.095528	2.720307 ***
PROC	0.063047	1.770889 *	0.014124	0.435568
OVERHANG	-0.105325	-0.277548	-0.386979	-0.905350
DTT	-0.000545	-1.467264	-0.001496	-2.326373 **
AGE	0.002937	1.569295	0.002040	1.064149
ASSET	-0.057026	-2.056974 **	-0.041303	-1.410478
LEV	0.003710	0.762947	-0.001300	-0.212634
STD	3.854531	3.082694 ***	3.631458	3.154052 ***
PRIOR	0.361632	3.895465 ***	0.423331	5.019609 ***
MKTSTD	0.454353	0.092798	-1.275600	-0.209773
UWPREM	0.069817	1.412173	0.066196	1.366497
MAI	0.033447	0.644409	0.445089	3.685293 ***
Intercept	-0.019457	-0.063031	-0.019352	-0.057408
Industry&Year	No	No	Yes	Yes
R-squared	0.23191		0.384398	
Adj R-squared	0.20098		0.298394	
F-statistic	7.497947 ***		4.469571 ***	
N				

*, **, and *** are 10%, 5%, and 1% significant, respectively.
Reported t-White heteroskedasticity consistent standard errors and covariance.

VII. Conclusion and Further Studies

This paper presents an evidence of conflict of interest arising in investment banks where they are acting for the interests of both IPO issuers and investors but the latter are reportedly treated more favorably, resulting in the documented IPO underpricing. A closer look inside an investment bank casts doubt on the effectiveness of the established corporate governance structure, such as the Chinese Wall and the syndicate desk, to wisely collaborate between the financial advisory/corporate finance team, representing the interest of IPO issuers, and the sales force, representing the interest of investors. This study takes 311 IPOs in the Stock Exchange of Thailand from 1993 to 2010 to experiment the effect of different structure of IPO intermediation on the IPO underpricing. In the sample, 53 IPOs have their financial advisors as independent entities from the underwriters. Overall, IPO investment gives the average initial returns of 16.9% or 17.5% if adjusted for market returns. The regression results indicate that having financial advisors affiliated to the underwriters, on average, an IPO has a higher market-adjusted initial return of 8.7% (or 10% in the model controlling for industry and year effects.) In other words, independent financial advisors help alleviate the conflict of interest arising in part of underwriters whose interest also lie in their investor relations, and thus the IPO transactions carried out by independent financial advisors tend to have a smaller underpricing.

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