COMMERCIAL BANKS IN UNDERWRITERS AND THE DECLINE OF THE INDEPENDENT INVESTMENT BANK MODEL

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I. INTRODUCTION

The period from 1997 to 2008 has witnessed a dramatic transformation of the investment banking sector. While, prior to 1999, securities firms comprised most of the top fifteen placed underwriters in the League Tables, commercial banks had come to dominate the League Tables by 2008. Part of the disappearance of prominent independent investment banks can be traced to heavy losses or declines of reputational capital. For example, First Boston was folded into Credit Suisse in 1989 after suffering enormous losses from merchant banking loans. Salomon Brothers, unable to recover from the hit to its reputation due to trading irregularities in the early 1990's, sold to Travelers in 1998. In 2008, heavy losses in their proprietary portfolio of mortgaged-backed and collateralized debt obligations forced Bear Stearns and Merrill Lynch to sell to JP Morgan Chase and Bank of America, respectively, and Lehman to succumb to bankruptcy. Nonetheless, most securities firms lost independence through takeovers by commercial banks. Thus, contrary to the expectations of those advocating the full deregulation of investment banking in 1999, eleven years later the industry has undergone a consolidation wave that has perpetuated the traditional structure of investment banking as an industry dominated by a limited number of organizations. Moreover, deregulation led to the emergence of the commercial plus investment banking model that gradually has replaced the traditional integrated investment bank model adopted earlier by securities firms. Interestingly, the new model has materialized through the acquisition of securities firms by commercial banks.

This article purports to examine two questions. First, what explains the acquisitive strategy of commercial banks? Second, does the commercial plus investment banking model possess any distinct advantages over the pure investment banking model in the conduct of underwriting business? The answer

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to the second question is relevant to the issue of long-run sustainability of this new model. This article examines a wide body of literature and empirical evidence in relation to these issues.

II. HISTORICAL BACKGROUND

Prior to the repeal of the Glass-Steagall Act by the Financial Services Modernization Act of 1999, commercial banks were barred from being directly involved in the underwriting and trading of corporate securities. However, several steps of deregulation adopted by the Federal Reserve Board had already empowered banks to enter the underwriting and trading business. In 1987 banks were given Tier I powers that allowed them to underwrite municipal revenue bonds, mortgage-and asset-backed debt and commercial paper, as long as these activities were organized under Section-20 affiliates of the commercial banks and the revenues of the traditionally non-permissible activities did not exceed 5% of the total revenues of the affiliate. In 1989, commercial banks were allowed to underwrite and trade corporate debt and equity (Tier II powers) through Section-20 affiliates and the revenue constraint was eased to 10%. This revenue limit was further raised to 25% in 1996 along with the removal of the strict firewalls that had separated the information flow and, hence, the integration of commercial lending and investment banking up to that time.

By the time the Glass-Steagall Act was repealed in 1999, all major United States and foreign commercial banks had established their presence in the securities underwriting market. Most of the commercial banks had expanded into the investment banking business organically by establishing Section 20 securities affiliates or by buying small securities firms. The lifting of the revenue limit to 25% allowed banks to pursue acquisitions of greater scale, as for example the Bankers' Trust acquisition of Alex Brown in 1997. In an even more dramatic fashion, the co-mingling of commercial and investment banking was accomplished through the merger of Travelers and Citicorp in 1998, which became the catalyst for the repeal of the Glass-Steagall Act.

III. THE RISE OF COMMERCIAL BANKS AS UNDERWRITERS

Table 1 shows the major acquisitions and mergers involving commercial banks and securities firms. The table includes only those transactions where both the acquirer and acquiree are underwriters ranked in the League Tables published annually by the Investment Dealers Digest. This data restriction excludes cases where the acquired firm is a very small underwriter with little impact on the market.

It is clear that with the exception of JP Morgan Chase, the other major commercial banks built their market share in underwriting by acquiring, directly or indirectly, securities firms with significant presence in the various underwriting markets.

Table 1: Acquisitions by Major Commercial Banks Up to 2007**

**Firms in brackets are those that were part of the acquired firm. Names in italic font are hose of securities firms.

Acquiring Bank	Year of Acquisition and Acquired Bank or Securities Firm
Citigroup	1998 - Travelers [Smith Barney; Shearson; Salomon Bros.] 2000 - Schroders (U.K.) 2000 - Lewco Securities 2005 - Legg Mason Wood Walker
JP Morgan Chase	2000 - Chase Bank [Chemical Bank] 2004 - Banc One
Bank of America	2000 – Nations Bank [*Montgomery Securities*] 2004 - Fleet Bank [Bank of Boston (*Robertson Stevens*); *Quick & Reilly* (*L.F. Rothchild*)]
CSFB	1989 - First Boston 2000 - *Donaldson, Lufkin and Janrette*
UBS	1998 - SBC (Warburg (U.K.); Dillon Reed) 2000 - Paine Webber 2006 - Piper Jaffray
Deutsche Bank	1989 - Morgan Grenfell 1999 - Bankers Trust [Alex Brown]

Table 2 shows the fraction of total proceeds raised by commercial banks and their affiliates (hereafter, commercial banks) and by independent investment banks that placed in the top fifteen positions of the League Tables in the years 1989, 1999 and 2007.[1] The three underwriting categories are all debt and equity issues, common stock issues and initial primary offerings in the United States. The table also shows the number of commercial banks and

[1] The percentages do not add up to 100% because they are estimated by taking the total market share of the commercial banks and independent investment banks, respectively, that appear in the top 15 spots. The remainder represents the market share of commercial banks and independent investment banks that do not appear in the League Tables.

independent investment banks, respectively, that placed in the top fifteen positions of the League Tables. The data shows that by 1999, commercial banks on average controlled one third of these underwriting markets. By 2007, their share had grown to about 56% for all debt and equity issues, and 44% and 48%, respectively, for common stock and initial primary offerings. Table 2 also shows that by 1999, commercial banks occupied a greater number of the top fifteen positions. This dominance was stronger in the debt plus equity category in 2007, where ten of the top fifteen underwriters were commercial banks.

TABLE 2: Market Share and Number of Commercial Banks and Securities Firms in the Top 15 Positions of the League Tables**

**Market share is given as percentage. Numbers in parentheses are the count of commercial banks and affiliates or securities firms placed in the top 15 spots of the League Tables.

	1989		1999		2007	
	Commercial Securities	Bank Firms	Commercial Securities	Bank Firms	Commercial Securities	Bank Firms
Debt & Equity	13.1(2)	81.2(13)	38.4(8)	52.3(7)	55.9(10)	33.7(5)
Common Stock	3.9(1)	86.9(14)	33.4(9)	60.5(6)	44.1(8)	50.7(7)
IPOs	4.7(1)	85.7(14)	28.4(8)	66.2(7)	48.1(8)	51.9(7)

IV. THE ARGUMENTS FOR ACQUISITIONS VERSUS ORGANIC GROWTH

Compared to securities firms, commercial banks were endowed by heavy balance sheets and more stable sources of funds. This capital superiority gave banks the flexibility to pursue expansion by acquisitions or through organic growth. The fact that the commercial plus investment banking model was built mostly by acquisitions suggests that capital heft was not sufficient. This article proposes that the acquisitive strategy enabled commercial banks to overcome barriers to entry faster and at a lower start up cost.

Successful conduct of the underwriting business requires support from other securities-related operations: brokerage, trading and market making, asset management, and research and analysis. Therefore, commercial banks willing to enter the underwriting business had to build multi-service infrastructures that would be too costly if done in-house. Second, underwriting requires significant relationship and reputational capital to win mandates for new issues. Again it would have been very costly and time-consuming for commercial banks to develop this type of capital. Third, the lending operations of commercial banks, while advantageous in attracting underwriting business from relatively small and lower quality firms, were not necessarily so with respect to larger, better quality firms that have greater access to capital markets and are subject to lower information asymmetry.

The role of the investment banker in underwriting is that of an intermediary that brings together issuers and investors. To act as lead managers in the syndication process, investment banks need to secure issuance deals from potential issuers and then identify investors with whom they place the new securities. Therefore, strong networks of issuers and investors, as well as skills in price discovery, comprise the competitive advantages in the underwriting business. The need to develop and maintain these advantages were the main reason for the emergence of the earlier integrative investment banking model (adopted by securities firms) that combines underwriting with corporate finance advisory services as well as with brokerage, asset management, trading, market making, and analyst research and coverage.[2] The lynchpin of this integrative model has always been reputation, that is, the expectation for high-quality execution across the spectrum of operations that came to define investment banking.[3] Reputation is what gives investment banks certification power, that is, the credibility they are fair arbiters of value in financial transactions. The evidence shows that reputable underwriters are more likely to place bonds (especially those of low quality) at lower yields (i.e., cost of capital) to the issuer and charge higher spreads for their services.[4] Reputation is established though through repeat execution of deals that allows the market to form an opinion about the quality profile and the skills of an investment bank. Therefore, reputation is developed over a fairly long period of time. This explains why a small group of top investment banks, the so-called bulge bracket banks, came to dominate the top ranks of investment banking markets with remarkable stability.[5]

Once commercial banks were permitted to enter investment banking, it was imperative that they embraced the integrative investment bank model. It

[2] Morrison, A. and W. Wilhelm, 2008, The demise of investment banking partnerships: Theory and evidence, *Journal of Finance* 63, 311-350.

[3] Brau, J. and S. Fawcett, 2006, Initial Public Offerings: An analysis of theory and practice, *Journal of Finance* 61, 399-436.

[4] Fang, L., 2005, Investment bank reputation and the price and quality of underwriting services, *Journal of Finance* 60, 2729-62.

[5] Hayes, S., M. Spence and D. Marks, Competition in the Investment Banking Industry (Cambridge, Mass.: Harvard University Press, 1983).

was also important that they developed their reputational and relationship capital quickly. The easiest approach to accomplishing this dual goal was to takeover already established investment banks that operated as securities firms. As the remainder of the article will show, the successful conduct of underwriting is dependent on various other services. The acquisition strategy was, therefore, the most efficient approach for commercial banks to overcome barriers to entry emanating from the particular organizational structure of underwriting firms and the need for reputation.

V. UNDERWRITING AND THE STRUCTURE OF THE INVESTMENT BANK

The innovative advantage that commercial banks brought to the underwriting business was their relationships with corporate clients through loan services and retail customers through deposit and savings products. Whether this advantage is decisive for the success of the commercial plus investment bank model depends, however, on its relative importance compared to other competitive resources available to independent investment banks. The review of the literature reveals that success in underwriting is impacted critically by relationships, analyst quality and coverage, formation of syndicates and pricing and allocation of new issues. This implies that the competencies and capabilities a firm brings to its underwriting business depend on its organizational structure.

A. Relationships in Investment Banking

On the issuer side of relationships, commercial banks came into the underwriting business with a distinct advantage over securities firms, that being their lending relationships with firms that can be potential issuers. On the investor side, however, securities firms had an advantage because of their long standing trading and brokerage relationships, as well as asset management services. So, the question is: what type of relationships affect the flow of underwriting deals?

Lending relationships can be advantageous in two respects. They can help reduce the cost of price discovery and, thus, offer issuance cost savings. They can also increase the likelihood that loan clients will choose their lender to act as underwriter if relationship banking optimizes the overall net benefits to the client. However, the advantage of commercial banks due to lending relationships is not free of possible conflicts of interest. On the one hand, commercial banks can produce more inside information about a firm’s quality of business. Thus, they can better certify the value of the firm’s securities and bridge the information gap between outside investors and firm insiders. Yet, a bank has a self-serving interest in facilitating a new issue by a high-risk loan client if the purpose of the proceeds is to pay the bank's loan. Therefore, acting as underwriters, commercial banks face a value certification advantage over independent investment banks as well as a conflict of interest that makes them less credible price setters.[6]

Early research on the topic of lending relationships and issuance costs revealed mixed evidence. Gande, Puri, Saunders and Walter report that underpricing was lower for bonds of lower quality if underwritten by commercial banks than securities firms, especially when proceeds were not used to repay the bank's debt.[7] To the contrary, Rotten and Mullineaux do not find any significant difference in the degree of underpricing.[8] These authors do find, nonetheless, that banks charged lower underwriting fees than those charged by securities firms in the case of low quality bond issues. This would imply that banks have more private information about their issuers and they pass their cost savings to clients through lower fees. The evidence in studies of equity offerings – IPOs in particular – shows that while there was no difference in gross fees[9] underpricing was lower if the underwriter was a commercial bank.[10] A more recent study that includes issues up to 2004 shows that commercial banks charged significantly lower fees than independent underwriting firms in the case of initial primary offerings (IPOs), seasoned equity offerings (SEOs) and debt offerings.[11]

What is the relative value of lending relationships versus underwriting relationships? Shenone reports that a lending relationship between the lead underwriter and the issuer helps reduce IPO underpricing more than a prior underwriting relationship.[12] She finds, though, that among issuers with prior loan and underwriting relationships a greater fraction choose the prior

[6] Puri, M., 1999, Commercial banks as underwriters: Implications for the going public process, *Journal of Financial Economics* 54, 133-163.

[7] Gande, A., M. Puri, A. Saunders and I. Walter, 1997, Bank underwriting of debt securities: modern evidence, *Review of Financial Studies* 10, 1175-1202.

[8] Rotten, I. and D. Mullineaux, 2002, Debt underwriting by commercial bank-affiliated firms and investment banks: More evidence, *Journal of Banking and Finance* 26, 689-718.

[9] Gande, A., M. Puri and A. Saunders, 1999, Bank entry, competition and the market for corporate securities underwriting, *Journal of Financial Economics* 54, 165-195.

[10] Fields, P., D. Fraser and R. Bhargava, 2003, A comparison of underwriting costs of initial public offerings by investment and commercial banks, *Journal of Financial Research* 26, 517-534.

[11] Kim, D., D. Palia, and A. Saunders, 2008, The impact of commercial banks on underwriting spreads: Evidence from three decades, *Journal of Quantitative and Financial Analysis* 43, 975-1000.

[12] Schenone, C., 2004, The effect of banking relationships on the firm's IPO underpricing, *Journal of Finance* 59, 2903-58.

relationship underwriter than the prior relationship bank. Yasuda finds evidence that prior lending relationships have a positive impact on the underwriter choice.[13] This preference is stronger among first-time and low-quality debt issuers where the bank relationship is more effective in producing credible offer prices. The importance of prior lending relationships is also confirmed in Bharath, Dahiya, Saunders and Srinivasan, who find a higher probability for a debt and IPO underwriting mandate when the underwriter has been a lender to the issuing firm.[14] Prior lending relationships, however, are not more advantageous than prior underwriting relationships in securing SEO mandates.

Another competitive advantage of commercial banks is their capacity to extend loan facilities concurrently with new issue placement services. Whereas in 1994 only 1% of seasoned equity offerings (SEOs) had a concurrent loan deal, this percentage had risen to 20% by 2001.[15] These authors find that in concurrent deals the average underpricing, underwriter spread and loan yield are lower and this is more so for lower-quality issuers. More important is the evidence that concurrent deals increase the probability of securing a SEO mandate over and beyond what would be expected because of any prior lending relationship. Surprisingly, the study also finds that securities firms had underwritten a significant portion of concurrent deals, as they tried to counter the lending advantage of commercial banks.

The above evidence supports the view that lending relationships have a positive impact on underwriting deal flow, but it also shows that they are most critical for the underwriter choice of first-time issuers who are relatively small, less well-known and lower quality firms. We can infer then that lending relationships alone could not have enabled commercial banks to gain underwriting business in the more lucrative market segment occupied by large, well-known issuers. These issuers could continue to deal with their traditional independent investment banks.

Although prior lending relationships gave commercial banks an advantage in price discovery, especially in the case of lower quality issuers, the literature also shows that other benefits to the issuer mattered as well and can influence the underwriter choice.

[13] Yasuda, A., 2005, Do bank relationships affect the firm's underwriter choice in the corporate-bond underwriting markets?, *Journal of Finance* 60, 1259-1292.

[14] Bharath, S., S. Dahiya, A. Saunders and A. Srinivasan, 2007, So what do I get? The bank's view of lending relationships, *Journal of Financial Economics* 85, 368-419.

[15] Drucker, S. and M. Puri, 2005, On the benefits of concurrent lending and underwriting. *Journal of Finance* 60, 2763-99.

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B. Analyst coverage

One of the major services the lead underwriter offers the issuer is to provide analyst coverage of the new security. Bradley, Jordan, and Ritter find that analyst coverage starts for 76% of IPOs immediately after the end of the quite period and the market responds positively by bidding up the so covered IPO shared.[16] This is particularly important for IPOs since the new issue is relatively unknown to investors. More extensive analyst coverage increases the firm's visibility and investor base and eventually the price of the new security. In the case of IPOs, insiders can benefit from selling at higher prices once the lock up period expires. Consistent with this, Cliff and Denis find that issuers are less likely to switch to another underwriter for future issues as the analyst coverage increases.[17] However, higher analyst quality comes with greater underpricing.[18]

Direct evidence on the positive impact of analyst quality on underwriting market share is reported in Dunbar.[19] Star analyst movement across underwriters also affects the underwriter choice and deal flow.[20] When All-Star analysts switch to another investment bank, the hiring bank gains in equity market share whereas the previous employer of the leaving analyst loses. The market share gain is not related to more aggressive recommendations at the new investment bank and the gains are due to new issuers attracted to the hiring firm. Underwriter quality in analyst coverage also affects the decision to switch to another investment bank. Thus, Krigman, Shaw and Womack find that securing higher quality in analyst coverage is a more important factor for switching to another underwriter than the degree of underpricing.[21] Similarly, Burch, Nanda and Warther find that graduating to an underwriter of higher quality for a follow-on issue is motivated by greater analyst coverage.[22]

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[16] Bradley, D., B. Jordan and J. Ritter, 2003, The quiet period goes out with a bang, *Journal of Finance* 58, 1-36.

[17] Cliff, M. and D. Denis, 2004, Do initial public offering firms purchase analyst coverage with underpricing?, *Journal of Finance* 59, 2871-2901.

[18] Bradley, D., B. Jordan and J. Ritter, 2003, The quiet period goes out with a bang, *Journal of Finance* 58, 1-36.

[19] Dunbar, C., 2000, Factors affecting investment bank initial public offering market share, *Journal of Financial Economics* 55, 3-43.

[20] Clarke, J., A. Khorana, A. Patel, and P. Rau, 2007, The impact of all-star analyst job changes on their coverage choices and investment banking deal flow, *Journal of Financial Economics* 84, 713-737.

[21] Krigman, L., W. Shaw and K. Womack, 2001, Why do firms switch underwriters?, *Journal of Financial Economics* 60, 245-84.

[22] Burch, T., V. Nanda and V. Warther, 2005, Does it pay to be loyal? An empirical analysis of

Moreover, this motive overtakes the benefits of loyalty which result in lower underwriter fees for equity issuers (although not for debt issuers).

The importance of analysts is tempered, however, by the need to protect reputation. Ljungqvist, Marston and Wilhelm report that the flow of underwriting mandates is influenced more by past debt or equity underwriting relationships than aggressive analyst recommendations.[23] Reputable investment banks are less likely to use analyst recommendations to please the issuer because of the high cost they may pay in reputational capital. Thus having worked with a reputable underwriter in the past is more important for future mandates. Fernando, Gatchev and Spindt argue that issuers and underwriters are matched by their relative quality.[24] They find that high (low)-quality issuers end up with high (low)-quality underwriters and ongoing underwriting relationships depend on the stability of the issuer-underwriter relative quality.

The above findings imply that underwriting relationships, reputation and quality of analyst coverage are additional important factors in attracting new issue deals besides prior lending relationships and the level of issuance costs.

C. Syndicate structure and competition

Despite their fierce competition for underwriting deals, investment banks are forced by the nature of this activity to form coalitions in the form of syndicates that collectively underwrite and place new securities. The persistence of underwriting syndicates is proof of the importance issuers attach to the various services they expect from underwriters beyond a guaranteed placement of the new issue. Syndication improves price discovery, achieves placement over a wider investor base, increases the issue's visibility and information flow through greater analyst coverage and secures a more liquid aftermarket through more extensive market making.

Although an integrated investment bank can offer all these services, it is unlikely that it can offer them equally well as a group of underwriters. The issuers' demand for more co-managers is also an indication of the enhanced services syndicates can produce. Furthermore, exclusive handling of new issues would prevent the lead underwriter from participating in several deals simultaneously, given capital and other resource constraints. Frequent deals and

underwriting relationships and fees, *Journal of Financial Economics* 77, 673-700.

[23] Ljungqvist, A., F. Marston and W. J. Wilhelm, 2006, Competing for securities underwriting mandates: banking relationships and analysts recommendations, *Journal of Finance* 61, 301-40.

[24] Fernando, C., V. Gatchev and P. Spindt, 2005, Wanna dance? How firms and underwriters choose each other, *Journal of Finance* 60, 2437-70.

repeat business is, however, important for maintaining the requisite skill set within a dynamic market setting. Syndication is also a form of risk-sharing that reduces each underwriter's risk that the new issue will fail to attract investors at the fixed offer price.

Notwithstanding the advantages of collaboration with other underwriters, syndication poses risks for established lead-managing firms. Hayes describes how in the 1970's Merrill Lynch and Salomon Brothers used their respective advantages in retail investor networks and fixed income analysis to join syndicates as co-managers and move closer to issuers.[25] This way they increased their chances to be chosen for the lead underwriter's position in future deals. It is interesting, therefore, to examine the factors that drive the formation of syndicates and how investment banks strategize to increase their chances to be included in underwriting syndicates.

In their study of the structure of underwriting syndicates, Corwin and Schultz find that the likelihood an investment bank will be included in the syndicate increases with underwriter reputation, number of star analysts, and prior status as lead underwriter.[26] They show that syndicates with more co-managers produce better price discovery, provide greater analyst coverage and more extensive market making in the aftermarket. But syndicates with more co-managers also result in higher underwriting fees. Pichler and Wilhelm propose that syndicates perform a monitoring function to ensure that the lead underwriter delivers the expected quality of service for the fee charged.[27] In this monitoring framework, the members of the syndicate not only complement each other across various services. They also monitor the efforts of the lead underwriter and thus the overall quality of the deals handled by the syndicate. Since syndicate memberships are relatively stable,[28] each investment bank has a self-serving interest to protect its own reputation which would be tarnished if lead managers pursued their own gain at the expense of the reputation of the syndicate. This is one of the reasons why issuers insist on the presence of more co-managers and they are willing to pay higher fees.

The monitoring theory of syndicates explains why investment banks that receive new issue mandates are forced to invite potential rival banks to participate in the syndicate. Song presents interesting evidence on the reasons

[25] Hayes, S., 1979, The transformation of investment banking, *Harvard Business Review* 79, 153-170.

[26] Corwin, S. and P. Schultz, 2005, The role of IPO underwriting syndicates: Pricing, information production, and underwriter competition, *Journal of Finance* 60, 443-486.

[27] Pichler, P., and W. Wilhelm, 2001, A theory of the syndicate: Form follows function, *Journal of Finance* 56, 2237-2264.

[28] Corwin, S. and P. Schultz, 2005, The role of IPO underwriting syndicates: Pricing, information production, and underwriter competition, *Journal of Finance* 60, 443-486.

for and the performance of hybrid syndicates, i.e., those comprised of an independent investment bank acting as lead underwriter and a commercial bank acting as a co-manager.[29] Hybrid syndicates are more likely to be used when there is more informational asymmetry about the issuer and the lending relationship between the issuer and the commercial bank raises the perception of a conflict of interest, which could diminish the certification power of the bank. Song finds that hybrid syndicates are indeed more frequently used when the issuer is a smaller firm, has lower rating, relies more on bank loans and has less prior access to capital markets. Compared to commercial bank-led syndicates, hybrid syndicates underwrite a greater fraction of debt issues when the proceeds are used to repay the bank's loan. The evidence also shows that the incidence of hybrid syndicates increased with the expansion of commercial banks into underwriting. Narayannan, Rangan and Rangan also find that prior relationships and possible conflicts of interest determine whether a commercial bank lead-manages as opposed to co-managing a syndicate.[30] They find that a commercial bank is less likely to be chosen to lead-manage the SEO of a loan client. Moreover, when there is a lending relationship, co-management of the syndicate by the relationship commercial bank and the independent underwriter averts any pricing discount due to the perceived conflict of interest and results in lower underwriting fees. These findings imply that the presence of an independent investment bank restores certification power whereas the commercial bank's lending relationship with the client reduces the cost of price discovery.

Demonstrating deal execution skills to the issuer is of particular importance for establishing reputation in the underwriting business. Since the second half of the 1990's, one resource that has acquired particular importance for issuers is top analyst coverage. Ljungqvist, Marston and Wilhelm present evidence that investment banks make strategic use of their strength in top analysts to increase the chances of joining future syndicates.[31] They find that investment banks issue favorable coverage for potential issuers, especially when the latter prefer to hire multiple co-managers, and this increases the likelihood of being hired subsequently as co-managers. In addition, past relationships with the issuer and the eventual lead underwriter, as well as the capacity to lend increase the chances of an investment bank joining the syndicate.

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[29] Song, W., 2004, Competition and coalition among underwriters: The decision to join a syndicate, *Journal of Finance* 59, 2421-44.

[30] Narayanan, R., K. Rangan and N. Rangan, 2004, The role of syndicate structure in bank underwriting, *Journal of Financial Economics* 84, 87-109.

[31] Ljungqvist, A., F. Marston and W. J. Wilhelm, 2009, Scaling the hierarchy: How and why investment banks compete for syndicate co-management appointments, *Review of Financial Studies* 22, 3977-4009.

Overall, the evidence shows that commercial banks and independent investment banks can produce complementary syndicate benefits in the execution of underwriting deals that increase certification power and lower costs. The evidence also reveals that without a fast buildup of analyst power and reputation commercial banks would have had hard time penetrating the market for IPOs and other offerings by higher quality issuers that have greater bargaining power in the negotiations regarding the overall package of services surrounding an underwriting deal.

D. Pricing and allocation of new issues

The value of underwriters as information intermediaries is greater when there is an information gap or asymmetry between issuers and investors. The underwriter's job is to arrive at an offer price for the new issue that is credible to both parties. Therefore, underwriters must engage in the costly process of price discovery. If public information were all that is needed for the valuation of new issues, underwriters would have little need for relationships with issuers and investors. In a world of information asymmetry though, underwriters need to extract private information from both sides of the market. Arriving at a credible offer price has value, however, if it has a singular importance for the placement of the issue. The literature shows that the importance of price discovery for placement is affected by how underwriters manage their relationships with issuers and investors.

As noted earlier, traditional investment banks (i.e., securities firms) had a relationship advantage with respect to investors, especially those considered to be well-informed, i.e., institutional investors. Upon receiving an underwriting mandate the investment bank engages in an underwriting investigation with the purpose to gather information about the issuer that can be communicated credibly to the investors. In this connection, commercial banks enjoy an advantage because of their lending relationships to potential issuers, which allows banks to possess inside information on an ongoing basis. This can lower the price discovery costs significantly and can also increase the bank's credibility as it conveys value-related information to investors. However, this apparent competitive advantage of commercial banks over traditional independent investment banks is subject to two possible limitations. One is the aforementioned potential of a conflict of interest that diminishes the bank's credibility as an objective arbiter of the information exchange. The second limitation is how sensitive new issue mandates and placement are to the offer price.

A review of the pertinent literature on price discovery and allocation of new issues reveals that we can distinguish among three paradigms. The first is the reward to private information paradigm; the second is the enhanced benefits paradigm; and the third is the reciprocity of benefits or quid pro quo paradigm.

(i) The reward to information paradigm

The reward to private information or extraction of information paradigm is best exemplified in the Benveniste and Spindt hypothesis that underwriters use underpricing as a reward to private information they receive from informed investors.[32] The premise of this hypothesis is the bookbuilding method of arriving at the offer price. Issuers are viewed as passive participants who rely on the underwriter to gather information and then achieve the highest possible offer price. Because underwriters do not know whether investors have the same opinion about the value of the issue, they promise those investors who reveal positive information to reward them with greater allocations of underpriced issues. That is, the underwriter does not expropriate for the benefit of the issuer all the additional value over and above what was set by the underwriter as a result of the underwriting investigation and reflected in the preliminary filing price range. Indeed, there is extensive empirical evidence that when the final offer price is set above the preliminary price range (apparently because of positive information from investors), the resulting underpricing is greater than when the offer price is set below the mid-point of the price range. This pattern, called partial price adjustment, was first documented in Hanley[33] and subsequently in other studies, including Cornelli and Goldreich[34] and Lowry and Schwert.[35] The extraction of information hypothesis requires that underwriters form stable long-term relationships with investors in order to establish mutual trust and a reputation for fair dealing. In a recent study, Hoberg finds that underpricing of IPOs persists for a group of underwriters that have sustained relationships with institutional investors.[36] These contacts enable underwriters to be better informed and, hence, identify and pursue new issues that will perform well in the post-issue period. These high-underpricing underwriters can then use the underpricing to reward their institutional clients as well as seek rents from the parties involved in the

[32] Benveniste, L. and P. Spindt, 1989, How investment bankers determine the offer price and allocation of new issues, *Journal of Financial Economics* 24, 213-232.

[33] Hanley, K. W., 1993, The underpricing of initial public offerings and the partial adjustment phenomenon, *Journal of Financial Economics* 34, 231-50.

[34] Cornelli, F. and D. Goldreich, 2003, How informative is the order book? *Journal of Finance* 58, 1415-1443.

[35] Lowry, M. and G. Schwert, 2004, Is the IPO pricing process efficient? *Journal of Financial Economics* 71, 3-26.

[36] Hoberg, G., 2007, The underwriter persistence phenomenon, *Journal of Finance* 62, 1169-1206.

placement of new issues.

(ii) The enhanced benefits paradigm

The enhanced benefits paradigm focuses on the objective function of the issuer and questions whether issuers act with the sole purpose to maximize the proceeds from the issue. Several papers present evidence to the contrary. These papers argue that the firm insiders who have decision-making authority over new issues attempt to maximize a combination of firm-specific objectives, such as issue proceeds and analyst coverage, as well as self-specific objectives, such as proceeds from future sales of shares and side payments from underwriters in the form of spinning.

Aggarwal, Krigman and Womack propose that insiders of IPO firms care more about the market price of the stock at the time they can sell their holdings than at the time of the offer, thus paying less attention to underpricing.[37] Since the time insiders can unload shares is when the lockup expiration arrives, about 180 days after the IPO, the selling shareholders have an incentive to see that share price is relatively high at that time. These authors find that insiders retain more shares (presumably for later sale) in IPOs with greater degree of underpricing. Heavily underpriced offers also receive more analyst coverage and stronger recommendations, which are found to have an influence on the level of prices observed around the lockup expiration date. Loughran and Ritter offer further evidence that other side benefits distort the issuers' objective to maximize proceeds from a new issue.[38] One possible distortion comes from insiders' self-dealing as when they are promised allocations of hot IPOs.[39] The other distortion is related to what the authors call the "analyst lust" hypothesis, that is, the issuers' demand that their IPO is backed up by extensive analyst coverage. Analyst coverage is desirable because it creates and sustains "buzz" about the new issue and helps prop up its market price. Although providing extensive analyst coverage and other kickbacks increases the expected cost of the underwriting services, investment banks effectively offset this increase through excessive underpricing which lowers the underwriting risk and the costs of the placement effort. Interestingly, Loughran and Ritter find that the degree of underpricing increased dramatically in the late

[37] Aggarwal, R., L. Krigman and K. Womack, 2002, Strategic IPO underpricing, information momentum, and lockup expiration selling, *Journal of Financial Economics* 66, 105-137.
[38] Loughran, T. and J. Ritter, 2004, Why has the IPO underpricing changed over time?, *Financial Management* 33, 5-37.
[39] Loughran and Ritter (2004) cite the case of Frank Quatrone of CSFB who was accused of spinning by the SEC.

1990's and most of the rise was due to heavily underpriced IPOs underwritten by prestigious investment banks, since they were the ones that could satisfy the issuers' demand for extensive coverage by top quality analysts. Evidence in James and Karceski is also supportive of the view that underwriters try to garner new issue business through aggressive analyst coverage, especially of poorly received IPOs.[40]

The issuer's objective to maximize the issue proceeds can be also distorted because of cognitive biases. Loughran and Ritter invoke the "prospect theory" to argue that inside shareholders of IPO firms are more concerned about maximizing their wealth change than the level of their wealth.[41] If insiders anchor the preliminary estimate of their wealth at the midpoint of the price range, the wealth gain is then determined by the spread between the final offer price and the midpoint price. When the offer price is sufficiently higher than the midpoint price, insiders feel satisfied from the issue regardless of the money left on the table, for example, the difference between the opening market price and the offer price. On their part, underwriters have an incentive to inflate underpricing rather than charge a greater gross spread because insiders pay less attention to the underpricing. This is so because underpricing is after all contingent on market conditions, whereas the gross spread is fixed in advance. Furthermore, underwriters can use the excess underpricing to engage in quid pro quo deals with issuers, such as allocating hot IPO shares to the brokerage accounts of insiders (a practice called spinning), or with investors, such as demanding more brokerage business or aftermarket purchases to support the prices of new issues. Ljungqvist and Wilhelm provide evidence supporting the behavioral bias of issuers concerned with wealth change rather than level of wealth.[42] They find that IPO issuers are more likely to switch to another underwriter for a follow on SEO if they are not satisfied in terms of wealth gains resulting from the IPO deal.

(iii) The reciprocity of benefits paradigm

The quid pro quo paradigm refers mostly to rewards underwriters grant to investors to facilitate the placement of the new issues. These benefits go beyond what the Benvesniste and Spindt model of information extraction would

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[40] James, C. and J. Karceski, 2006, Strength of analyst coverage following IPOs, *Journal of Financial Economics* 82, 1-34.

[41] Loughran, T. and J. Ritter, 2002, Why don't issuers get upset about leaving money on the table in IPOs?, *Review of Financial Studies* 15, 413-43.

[42] Ljungqvist, A. and W. Wilhelm, 2005, Does prospect theory explain IPO market behavior?, *Journal of Finance* 60, 1759-1790.

suggest as necessary to coax informed investors to disclose any private information they may have about the issue. Hanley and Wilhelm,[43] as well as Sherman,[44] extend the Benveniste and Spindt model to suggest how and why underwriters and institutional investors form durable and stable relationships. To ensure loyalty and the truthful revelation of their private information, underwriters require that these investors purchase new securities in both hot and cold markets. In return, underwriters promise preferred allocations of underpriced issues so that investors realize net profits over the long-run. Consistent with this proposition, Aggarwal, Prabhala and Puri find that institutional investors receive underpriced IPO shares in excess of the amount justified by the extraction of information hypothesis.[45] Conversely, institutional investors are allocated proportionately less of cold IPOs. The implication is that either underwriters transfer excess profits to informed investors in anticipation of side payments or informed investors do not fully reveal their positive private information and oversubscribe for the hot new issues on account of their positive but undisclosed valuations. In related research, Aggarwal reports that institutional investors are treated preferentially with respect to flipping, i.e., selling back their allotted shares in the aftermarket.[46] By flipping a greater percentage of hot IPOs than cold IPOs, institutional investors realize net profits while at the same time help support weak demand for cold IPOs in the aftermarket. In a study of European IPOs, Jenkinson and Jones find little evidence that allocations favor investors who submit informative bids, that is, bids that can help the underwriter to produce a higher offer price.[47] Instead their evidence suggests that preferred allocations go to investors deemed to hold new shares for a longer-term period and, thus, help minimize flipping and sale pressure in the aftermarket. Boehmer, Boehmer and Fishe find that underwriters favor institutional investors with IPO stocks that realize positive one-year returns after the offer and allow flipping for IPO shares that realize low returns.[48]

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[43] Hanley, K. W. and W. Wilhelm, 1995, Evidence on the strategic allocation of initial public offerings, *Journal of Financial Economics* 37, 239-57.

[44] Sherman, A., 2000, IPOs and long-term relationships: An advantage of bookbuilding, *Review of Financial Studies* 13, 687-714.

[45] Aggarwal, R., N. Prabhala and M. Puri, 2002, Institutional allocation in IPOs: Empirical evidence, *Journal of Finance* 57, 1421-1442.

[46] Aggarwal, R., 2003, Allocation of IPOs and flipping activity, *Journal of Financial Economics* 68, 111-135.

[47] Jenkinson, T. and H. Jones, 2009, IPO pricing and allocations: A survey of the views of institutional investors, *The Review of Financial Studies* 22, 1477-1504.

[48] Boehmer, B., E. Boehmer and R. Fishe, 2006, Do institutions receive favorable allocations of IPOs with better long-run returns?, *Journal of Financial and Quantitative Analysis* 41, 809-828.

Another way underwriters can trade underpriced new issues for a reciprocal favor from institutional investors is to ask that the latter buy additional IPO shares in the aftermarket. This post-issue buying activity, called laddering, increases demand and hence sustains share price at a higher than otherwise level.[49] It also generates greater degree of underpricing which underwriters can use to trade it for favors from issuers and investors. Griffin, Harris and Topaloglu report that IPO investors return to the market to buy additional shares from the lead manager.[50] Their evidence shows that buys are not motivated by genuine demand because the shares are resold in later periods, nor are they due to superior execution of buy orders by the lead managers. Furthermore, laddering appears to be more extensive when the lead underwriter is relatively active in the IPO market and thus can assure investors of future allocations of IPO shares. Besides helping to support price at a higher level, such aftermarket buys can be used to generate trading income for the lead underwriter. More on laddering is provided by Hao, who refers to evidence in the order book, run by the lead manager, indicating expression of interest to buy 2x or 3x the number of subscribed shares in the aftermarket.[51] Her evidence also shows that laddering coincides with higher offer prices but also with more money left on the table by the issuing firm.

Recent studies find evidence that allocation of new securities is not strictly tied to the effort of price discovery. Underwriting firms have extensive trading and brokerage business with institutional investors. Nimalendran, Ritter and Zhang find a positive relationship between the degree of underpricing and the volume of trading conducted by institutional investors around the IPO date.[52] This implies that trading business is exchanged for greater allocations of underpriced shares. Reuter finds evidence that mutual funds that have brokerage business with the lead underwriter hold more shares of IPO stocks in the aftermarket and this relationship is stronger for issues with greater underpricing.[53] Both studies find, however, that the gains from trading and brokerage do not exhaust the investor gains from underpricing. Therefore, the

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[49] In 2003 the Securities and Exchange Commission (SEC) settled laddering charges with JP Morgan, Morgan Stanley and Goldman Sachs in relation to Rule 101 of Reg-M of the Securities and Exchange Act of 1934 that prohibits this type of price manipulation (Hao, 2007).

[50] Griffin, J., J. Harris and S. Topaloglu, 2007, Why are IPO investors net buyers through lead managers?, *Journal of Financial Economics* 85, 518-551.

[51] Hao, G., 2007, Laddering in initial public offerings, *Journal of Financial Economics* 85, 102-122.

[52] Nimalendran, M., J. Ritter and D. Zhang, 2007, Do today's trades affect tomorrow's IPO allocations? *Journal of Journal of Financial Economics* 72, 555-580.

[53] Reuter, J., 2006, Are IPO allocations for sale? Evidence from mutual funds, *Journal of Finance* 6, 2289-2324.

remainder could be a reward for other benefits received by the lead underwriter, including private information. Ritter and Zhang also find that lead underwriters allocate more shares to their own family of mutual funds when underpricing is higher.[54] This evidence for nepotism suggests that underwriters use preferential allocations to juice up the performance of their mutual funds and thus attract more asset management business.

Using responses to surveys of institutional investors allocated shares in European IPOs, Jenkinson and Jones find that the volume of brokerage business is the most influential factor in the awarding of IPO allocations.[55] Most interesting is the finding that the contribution institutional investors make to the valuation of IPOs is limited and does not emerge as the main factor in influencing the allocation of shares. Although institutional investors exchange information with lead underwriters on new issues, not all such investors produce their own valuation and those who do are not eager to share it fully with the underwriters. Thus, for example, 71% of those investors who submitted a limit bid[56] responded that they set the bid price below their own valuation. These findings are not consistent with the view of the reward for information paradigm that is supposed to characterize the underwriter-investor relationship.

Quid pro quo deals can be also struck with retail investors. Although these investors are less important in improving the underwriter's valuation opinion, they can contribute to the demand for the new issue. Recent evidence suggests that attracting the interest of retail investors can impact the pricing outcome in new issues. Cook, Kieschnick and Ness find that when the underwriter promotes the issue among retail investors, the resulting "buzz" and anticipation produce higher final offer prices and enable underwriters to reap higher gross spreads.[57] The strong aftermarket demand by retail investors generates greater underpricing, but issuers do not seem to mind it since evidence shows they are more likely to keep the same underwriter for future new issues. Thus, pre-offering publicity is appreciated and rewarded by issuers. Cornelli, Goldreich, and Ljungqvist also report that retail investor over-optimism

[54] Ritter, J. and D. Zhang, 2007, Affiliated mutual funds and the allocation of initial public offerings, *Journal of Financial Economics* 86, 337-68.

[55] Jenkinson, T. and H. Jones, 2004, Bids and allocations in European IPO bookbuilding, *Journal of Finance* 59, 2309-38.

[56] A limit bid sets the highest (reservation) price at which an investor is willing to buy a fixed number of, say IPO shares. Another type of less informative bid is the strike bid which simply indicates that the investor is willing to buy new securities worth a fixed monetary amount at the consensus offer price.

[57] Cook, D., R. Kieschnick and R. Van Ness, 2006, On the marketing of IPOs, *Journal of Financial Economics* 82, 35-62.

produces higher prices in the pre-offer grey market for European IPOs.[58] This helps underwriters to set a higher than otherwise offer price. Moreover, underwriters seem to weigh less the information received from informed investors if the grey market price signifies retail investor over-optimism. The findings in these two studies suggest that relationships and interaction with retail investors is also important for investment banks in the execution of new issue deals. Aggarwal shows evidence that investment banks with stronger emphasis in retail investor clienteles award retail investors a greater portion of IPO shares than wholesale investment banks.[59] If retail investors are perceived to possess less valuable information for the pricing of a new issue, then what motivates the underwriters' preference in the allocation of new issue shares? Puri and Rocholl utilize allocation data from a sample of German banks serving as underwriters and find that retail investors subscribe to and buy proportionally more underpriced than overpriced shares.[60] This pattern implies that the banks share information with retail customers that enables the latter to discriminate between hot and cold IPOs. Moreover, the benefits banks expect as a qui pro quo include increased cross-selling of underwriting services with brokerage and consumer loans.

The review of the evidence in relation to the pricing and allocation paradigms reveals that the procurement of underwriting services takes place within a complex web of underwriter, issuer and investor interests that make the pricing and allocation of new issues also dependent on factors beyond those suggested by the pure price discovery paradigm. The most direct implication is that winning mandates and successfully placing new issues are not necessarily or strictly related to the quality of price discovery through the exchange of private information. Instead, both depend to a considerable extent on the structure of the underwriting firms as organizations of multi-faceted operations that enable the underwriting division to satisfy the evolving interests of issuers and investors through a variety of reciprocal and mutually beneficial exchanges.

VI. IMPLICATIONS AND PROSPECTS

With all major underwriting firms, including Goldman Sachs and Morgan Stanley, operating under the commercial plus investment banking

[58] Cornelli, F., D. Goldreich and A. Ljungqvist, 2006, Investor sentiment and pre-IPO markets, *Journal of Finance* 61, 1187-1216.

[59] Aggarwal, R., 2003, Allocation of IPOs and flipping activity, *Journal of Financial Economics* 68, 111-135.

[60] Puri, M. and J. Rocholl, 2008, On the importance of retail banking relationships, *Journal of Financial Economics* 89, 253-267.

model, what implications can we draw about the future conduct of underwriting business? The previous review of the literature has shown that integration of services is a potent condition for success in underwriting. But integrating multi-faceted operations under one corporate roof generates the possibility of serious conflicts of interest that can undo the benefits of synergy. Even before the ascendancy of the commercial plus investment bank model, securities firms operating as integrated investment banks were faced with conflicts of interest between their role as underwriters and their role as providers of services in research and analysis, brokerage, trading and asset management. The new conflict, therefore, stems from the role of the underwriter as a lender. Eventually, the case for joint versus separate production of financial services is a matter of whether the economies of scope more than offset the costs of managing and overcoming conflicts of interest.

It was explained above how the lender as underwriter is confronted with a conflict of interest that complicates its role as a credible and truthful discloser of the true state of the firm. Combining lending and underwriting can create additional unintended complications that a commercial plus investment bank has to manage. If a firm believes that its lender will eventually help it raise capital to repay the debt, the firm has less incentive to carefully screen and develop the investments it undertakes. Thus, the task of separating good from poor quality firms falls on the underwriting bank.[61] In this case, underwriting reputation is important in restoring the certification credentials of the underwriter. As a result the gains from economies of scope (extending both lending and underwriting services) may be offset by the costs of building and maintaining reputation. We saw that the hybrid syndicate is an efficient solution to this problem. Banks with lending ties to the issuer are willing to have an underwriter without such ties act as the lead manager of the syndicate. Surrendering the role of lead manager to another firm, however, reduces the overall direct and indirect gains the lender would earn as a lead manager. Kanatas and Qi also identify another complication in the issuer-lender relationship.[62] A firm that retains its lender as underwriter has greater assurance that the lender will provide a new loan if the new issue is withdrawn. Moreover, this refinancing does not necessitate any additional information production costs. This financial flexibility comes though at the cost associated with the ongoing monitoring of the firm by its bank. Underwriters without lending ties to the issuing firm can pry it away from its lending bank by

[61] Kanatas, G. and J. Qi, 1998, Underwriting by commercial banks: Incentive conflicts, scope economies, and project quality, *Journal of Money, Credit, and Banking* 30, 119-33.

[62] Kanatas, G, and J. Qi, 2003, Integration of lending and underwriting: Implications of scope economies, *Journal of Finance* 58, 1167-1192.

promising a greater probability of success for the new issue that eliminates the need to have a lender at the ready. This again introduces a trade-off between the gains from economies of scope and the attendant costs. It is not surprising, therefore, that smaller and riskier firms with less access to capital markets and greater likelihood of withdrawal are more likely to choose their lender as underwriter as the previous literature review has shown.

Another related theory on the value-added benefits of the multi-service versus the specialized financial institution is advanced by Bolton, Freixas and Shapiro.[63] Their model proposes that under certain conditions, multi-service organizations can provide credible disclosure of product information to their customers just like specialized firms. They argue that both organizational types have an incentive not to reveal the true quality of their products for fear of losing customers to rivals. The authors show that strong competition in the financial services market compels specialized firms to truthful disclosure even when reputation costs are low. On the other hand, one-stop firms with high market share can structure their prices across products so that they have less incentive to withhold information from customers. In the absence of strong competition, the cost from loss of reputation must be sufficiently high for both types of firms to conduct themselves truthfully, but in this case, one-stop firms lose their advantage. Given the importance of reputation in underwriting this theory suggests that both specialized and one-stop firms can co-exist.

Nonetheless, the structure of the underwriting markets is characterized by significant concentration. Utilizing data from the League Tables, it can be shown that the four-firm concentration ratio was, respectively, 36.4%, 48.7%, and 46.2% in the markets for debt and equity offerings, common stock offerings and IPOs in 2007. The high market share commanded by top underwriters affords them greater flexibility in structuring the prices of their services in yet another way than the one proposed in the above study. Benveniste, Ljungqvust, Wilhelm and Yu show that when an underwriter is successful in aggregating many contemporaneous flotations,[64] they can lower the average degree of underpricing for all issuers. This is possible because the bundling of new issues, especially of similar business lines, generates information spillovers that help reduce the cost of valuation and at the same time produce credible higher offer prices.

The above analysis suggests that the success of the underwriting business rests on a set of distinct organizational features that include multi-

[63] Bolton, P., X. Freixas and J. Shapiro, 2007, Conflicts of interest, information provision and competition in the financial services industry, *Journal of Financial Economics* 85, 297-331.

[64] Benveniste, L., A. Ljungqvist, W. Wilhelm and X. Yu, 2003, Evidence of information spillovers in the production of investment banking services, *Journal of Finance* 58, 577-608.

faceted services, reputation, and appreciable market share. The multi-faceted services are necessary in order to facilitate the management of relationships which can be used for information production, valuation, and placement of new issues. Reputation is needed to ensure ongoing quality and commitment to the tacit agreements underlying the relationships with issuers and investors. Finally, controlling considerable market share is both a consequence of reputation as well as the source of economies of scale, valuation skills, and the driver of sustained relationships.

Although there is much talk about the virtues of the "boutique" specialized firm as an investment banker, this is more relevant to the corporate finance (like M&A and restructuring advice) side of the investment banking business than the underwriting side. The offering of securities by large, well-known firms with presence in the capital markets produces valuations that depend much less on the information intermediation efforts of the underwriter. In this segment of the market, the conflict-free valuation advantage of specialized firms over the integrated investment bank is a lot less critical. The supposed advantage of a specialized firm to produce more objective valuations is more critical when there is high uncertainty and severe asymmetry of information, as in the case of IPOs, low-grade bonds, and SEOs of low quality and visibility firms. The above review of the literature has revealed, however, that these are the types of offerings which require that the underwriter provide the issuer with other benefits (like, analyst coverage and market making) which minimize the importance of a high valuation. In the case of such offerings, the underwriter also needs to use offer price discounts and discretionary allocation to ensure placement of the issue with investors. The end goal of the efforts of the underwriter is to equate the expected cost of the underwriting service to its net payoffs. The integrated investment bank appears to be more efficient than the specialized firm in executing this model of production of underwriting services

VII. CONCLUSIONS

This paper has pursued answers to two questions: (a) what explains the acquisitive strategy of commercial banks? and (b) does the commercial plus investment banking model possess any distinct advantages over the pure investment banking model in the conduct of underwriting business? Based on the review and analysis of the extant evidence, we can draw the following conclusions.

First, the strategy of commercial banks to expand into underwriting through acquisitions is explained by the need to overcome barriers to entry in a more time-efficient and less costly way. For commercial banks to expand their network of potential issuers beyond the domain of small and lower quality firms with which they had lending relationships, they had to establish their credentials as underwriters and develop relationships with investors. To do so it was necessary for banks to develop multiple operations in the securities business.

Second, the lending relationships of banks were not enough to secure mandates, especially from larger and more established firms. Thus, they could not easily displace the established securities firms in these client segments. Independent investment banks could utilize their resources in analyst research and coverage and prior underwriting relationships, as well reputation to continue to have a significant presence in the underwriting markets.

Third, lending relationships contribute positively to the chances of a bank to become a member of the syndicate, but they are not the only factor. Reputation, analyst coverage and market making services (i.e., the traditional operating features of securities firms) count even more than lending relationships. Besides, a lending relationship is more likely to relegate a commercial bank to the role of co-manager than lead manager, thus depriving it of the lion's share of the underwriting fees and influence.

Fourth, the price discovery process, best exemplified by the reward for information model, is only one of the several factors that impact the pricing and allocation of new issues. Therefore, the inside information commercial banks have due to lending relationships is not as important in light of the factors suggested, respectively, by the enhanced benefits and the reciprocal benefits paradigms.

Fifth, multi-service operations are prerequisites for satisfying the interests of issuers and investors in the execution of underwriting deals. Hence, the integrated investment banking model is more efficient than the specialized firm model.

Finally, the review of the evidence showed that independent investment banks have advantages that enable them to compete effectively with commercial banks in the underwriting business. Indeed, at the time of deregulation securities firms possessed more resources conducive to successful underwriting than the commercial banks. Therefore, it is not surprising that the consolidation wave toward the commercial plus investment banking model was driven by acquisitions undertaken by commercial banks. The more recent demise of independent investment banks has not been the superiority of the commercial plus investment banking model over the independent banking model in the underwriting side of the business. Rather, it has been the excessive risk taking of independent investment banks in trading and proprietary investments without the support of a heavy balance sheet.

An interesting question for future research is whether the economies of scope from adding lending relationships and other advantages of commercial banking have generated more value than the costs associated with the integration of investment banks under the organizational umbrella of commercial banks.