The Usual Suspects: Investment Banks' Recommendations and Emerging Markets

FIRST DRAFT

Sebastián Nieto Parra [1]
Institut d'Etudes Politiques de Paris (Sciences Po Paris)

Javier Santiso [2]
OECD Development Center

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[1] Chaire Finances Internationales, Ecole Doctorale en Sciences Economiques, Institut d'Etudes Politiques de Paris (Sciences Po Paris). E-mail: sebastian.nietoparra@sciences-po.org
[2] Chief Economist and Deputy Director, OECD Development Centre. E-mail: Javier.SANTISO@oecd.org
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Abstract

The paper addresses two core questions: do recommendations have an impact on the allocation of flows in the asset class? Above all, are we facing in this asset class major problems of asymmetries of information? In order to answer these questions, we used untapped and rich datasets. We constructed a unique database covering the period 1997-2006 for all the bond recommendations by the major Wall Street and City investment banks that dominate the emerging bond markets. The most important and relevant results are as follows. First, 90% of the underwriters recommend, at the announcement date of the issue, to buy or to maintain in their portfolio the bonds issued by the countries where they are acting as lead managers. Second, there is an additional bias, investment banks' recommendations depend also on the relative size of the secondary bond market. In fact, there is a phenomenon that we call "too big to underwrite" meaning that investment banks do not send negative signals to investors of countries that, given their size, are considered important for their business. Finally, by using a simple cross-section analysis, we found that the impact of investment banks' recommendations on capital flows is more significant and more predictable than some macroeconomic variables such as interest rates, economic growth and inflation.

Keywords: Brokers Research, Portfolio Flows, Information Asymmetries, Emerging Markets

JEL Number: F21, F32, F34, G15, G14.

1. Introduction

Since the beginning of the XXIst century, emerging markets have reached a kind of nirvana. The global search for higher returns led to record inflows of liquidity into dedicated emerging markets' bond and equity funds, especially in 2005 and 2006. In 2005, emerging market equity funds absorbed more than USD 20 bn on net inflows, five times more than the previous year and beating the record of 2003, according to data from *Emerging Portfolio Fund Research*, a US company that tracks fund flows around the world. Emerging bond markets also soared, breaking the previous record of inflows as more than USD 10 bn flew to these funds in 2005 against a meager USD 3 bn in 2004. The year 2006 saw an even more impressive turn of events: in January, global net inflows into emerging markets equities topped more than USD 11 bn, that is more than half of last year's total in a single month. In the first quarter alone of 2006, inflows exceeded those received during the whole of 2005.

The search for yield explains much of this story. Historically low interest rates in developed countries and soaring global liquidity, combined with structural macroeconomic improvements in the emerging markets asset class, led to an impressive search for yield that benefited emerging markets. This environment has been particularly favorable for investment banks with huge amounts of money pouring into the asset class, fees burgeoning and massive deals in the pipeline. The multilateral officials were probably the only unhappy people in the crowd, fearing that their institutions could be relegated to the trash heap of history. In Wall Street and the City, while yield-hungry buyers were casting the net wider in the hunt for returns, analysts and investment bankers were opening champagne.

However, this emerging market boom is not new. During the late nineteenth century, Latin American countries, for example, already experienced a massive foreign investment boom. A major part of the inflows took the form of sovereign debt, the bonds being traded in European financial centers. By that time, the market value of emerging market debt traded in London was impressive: at the turn of the XXth century, by 1905, its value was equivalent to 12% of world GDP. One century later, in 1999, the total volume of emerging debt market traded was however a meager 2,7% of world GDP. The recent allure of emerging markets has seen debt trading value jump to USD 5 500 bn in 2005 (roughly 12% of world GDP), which is simply restoring the position already reached 100 years ago.

Therefore, even if in nominal terms we are witnessing an explosion of bond flows towards emerging markets, this pales in comparison to the previous globalization era, in relation to the size of the world's economies. Not only was the previous era of global finance much more open in terms of total capital flows but emerging markets were also very present within London asset managers and bank portfolios. The largest bondholder of long-term cross border investments at the turn of the XXth Century was the United Kingdom, accounting for nearly half of all cross-border investments in the early XXth Century. At the time, about 30% of its investments were in government debt, 40% in railways, 10% in mining, and 5% in utilities. According to estimates from Mauro et al

(Mauro et al., 2002), by 1905, the market value of emerging markets bonds traded in London reached 25% of all government bonds traded in the City! By comparison, in recent years, US institutional investors have had barely 10% of their portfolios invested in foreign securities, with a meagre fraction of that capital devoted to emerging markets.

The asymmetries of information were also impressive by that time. In both periods of finance globalization news about wars or episodes of politically-motivated violence have been a significant and robust determinant of spreads. One difference is that in the first era, country-specific fundamentals account for a greater share of variation in spreads than they do today (Mauro, Sussman, and Yafeh, 2006). Another is that information asymmetries tend to be lower today than in the previous era, as also reflected by risk premiums. Although it is now hard to imagine a story such as that of Gregor McGregor, a Scottish trader and adventurer who "invented" a country, Poyais, and subsequently paper traded on that country in London during the 1820s, asymmetries of information still remain a concern today. Poyais was a fictious state that nevertheless borrowed on the London market in 1822. When investors discovered the fraud one year later and ceased to traded the worthless papers it ended in one of the first big series of Latin defaults. By the mid XIXth Century, as illustrated by the fictitious Poyais country, which managed to borrow on the same terms as legitimate states such as Chile, Colombia or Peru, the ability to distinguish between Latin American countries was scarce.

Today a repeat of this story is impossible: the levels of information are higher, the density and complexity of players is also greater. However asymmetries of information remain. One, in particular, which concerns mostly developed economies and equity markets is related to the autonomy of financial research. Most of the studies underline the bias with which the industry is plagued. However the empirical evidence on emerging markets is pretty scarce. If some studies have been conducted on emerging equity analysts, hardly any exist on emerging bond markets. Our study provides a first attempt to fill this gap. It addresses two core questions: are broker recommendations useful in emerging bond markets? In other terms do buy or sell recommendations have an impact on the allocation of flows in the asset class? Above all are we facing in this asset class similar problems of asymmetries of information? Are brokers' recommendations biased towards positive outlooks?

The remainder of this article is organized as follows. In Section two, we provide a review of the literature. In Section three, we describe the datasets we used, among them a unique and untapped dataset of all brokers' recommendations between 1997 to 2006 for Latin American emerging markets. In the fourth section, we study the relationship between investment banks' recommendations and some aspects related to the business of these banks (in particular sell-side business). This section gives some preliminary results in order to understand whether banks' advice to investors is biased. For that we analyzed firstly underwriters' recommendations and secondly the relationship between the size of emerging markets and recommendations. Section five analyzes the impact of broker recommendations on private capital flows towards emerging markets, matching the afore-mentioned database with another one on private portfolio flows. Lastly in the sixth

section we conclude by giving the most important results of this paper and we open the door to future research by employing the newly constructed database.

2. Overview of the literature

One of the most important factors affecting the efficiency of capital markets is the problem of asymmetry information between financial actors. More precisely, in an Initial Public Offering (IPO), an information advantage can arise concerning "fundamentals" of the security for the agent in charge of the underwriting (the bank) over the buyer of the security (the investor). This advantage allows underwriters, through reports made by market analysts, to send to investors recommendations biased towards increasing underwriters' profits, given that part of the payment made by the issuer to the underwriter depends on the "success" of the issue in the primary market.

Empirical literature has mainly investigated these stock market issues in relation to OECD countries. Womack (1996), for example, studied the impact that a recommendation may have on the price of a share issued in the American market by analyzing the excess return in the short and medium-term following a buy or sell recommendation made by analysts of the major brokerage firms. More recently, Jackson (2005) instances the Australian equity market to demonstrate that analysts are confronted by a trade-off between sending true signals to the market (thereby building up one's reputation) and sending optimistic recommendations to obtain the short-term benefit of higher commissions.

Studies of the relation between underwriters and recommendations are scarcer, and the results suggest there is a conflict of interest between different sides of an investment bank department, such as between the side charged with issuing securities and the research department. Analyzing the US equity market, Womack and Michaely (1999) found for example that 'stocks that underwriter analysts recommend perform more poorly than "buy" recommendations by unaffiliated brokers prior to, at the time of, and subsequent to the recommendation date', which suggests that recommendations by underwriter-analysts are biased.

From a theoretical point of view, the research literature concerning this topic is rich and useful. Myers and Majluf (1984) studied an asymmetric information problem involving managers of a firm about to issue stock to raise cash and potential investors. In the same vein, Stein (1989) modelled a non-cooperative game between managers and rational investors that yielded the short-term behaviour of equity prices following earnings manipulations by the managers. More relevant to our research, Benabou and Laroque (1992) studied the manipulation of prices by the effect of private and pre-announcements on prices. However, they noted that under some conditions investors can resolve this problem in the long run by reassessing the credibility of the individuals offering private information (the research analysts).

The purpose of our study is to focus on emerging markets that have not yet been analyzed from this angle. More precisely we intend to analyze this asymmetric information problem in relation to the bonds issued by Latin American governments through international banks (the underwriters) in the US and European capital markets. Our point of departure is Santiso (2003), which analyzes the political economy of Latin American emerging markets, focusing the attention on actors and institutions.

Research analysts play a centre role in financial markets. Together with fund managers they are at the heart of the confidence game (Santiso, 2003). Their recommendations influence the price of a company's stock or a sovereign bond. They live in a forward-looking world where anticipation and prediction (of rises or falls) is the key to reaching a financial nirvana measured in extra bonuses. Their cognitive regime is imbedded in short-term horizons, research and trade priorities and therefore potential conflicts of interest.

These research analysts study companies and sovereigns in emerging markets and make buy and sell recommendations on the securities of the firms they cover. They are usually specialized in a particular industry, sector or, for emerging markets, particular countries and areas, Latin America being in itself an asset class. Whether or not a company or country is covered by research analysts is a central issue. Without significant coverage by the industry, the company or country simply does not exist in the financial world [3]. Obviously being positively or negatively covered also matters as the analysts' outputs and opinions about a firm or a country are precious signals to which investors react. As underlined by academics, investors react to the information contained in analysts' earnings forecasts, stock recommendations and also target prices[4].

One major concern during the 1990s has been both their influence and independence. Analysts belong to institutions, for example investment banks, that are not homogeneous entities. Within each institution, each division and each department pursues certain goals and strategies that are linked with the firm, but that may conflict with one another. Investment banks for example have at least three identified sources of income that are basically brokerage services; (i) corporate finance activities, issuance of securities; (ii) merger and acquisitions advisory services; and (iii) proprietary trading. These three sources of income may create conflicts of interest within the firm, between departments and divisions, but also outside the firm with its potential or current clients. A frequent and observable conflict of interest occurs between investment banking and brokerage activities. The corporate division of a bank is responsible for the issuance of an

[3] The consequence of this is that companies or countries have to fight to be included in indexes or simply to be covered by analysts. This means for a company, for example, to present coherent products and corporate strategies easily and clearly indentifiable by stock market analysts. As underlined by Ezra Zuckerman, « a firm that participates in a given industry but does not draw attention from industry socialists can be described as suffering from coverage » and tend to contribute to diversifying strategies by corporate managers in order that their stock could be more easily understood by financial analysts. See Ezra Zuckerman, « Focusing the corporate product: securities analysts and de-diversification », *Administrative Science Quarterly*, n° 45, 2000, pp. 591-619.

[4] See Alon Brav and Reuven Lehavy, « An empirical analysis of analysts' target prices: short term informativeness and long term dynamics », Duke University and University of California at Berkeley, May 2001 (unpublished) ; Mark Bradshaw, « How do analysts use their forecasts ? », *Harvard Business School Working Paper*, 2000 (unpublished).

initial public offering (IPO) or a merger and acquisition for a client. The brokerage house of the firm, through its equity department, is responsible for covering the stock with a clear objective of delivering timely, unbiased and high quality information to clients that are investors. Clearly the objectives of the corporate division can clash with those of the equity research department.

In this case, analysts will do their best to deliver the most valuable and independent opinion. For this they use a narrow range of terms to qualify their recommendations – buy, strong buy, hold, neutral, over-perform or under-perform. However, one of the paradoxes underlined by the US Securities Exchange Commission in 2001, is that these analyses are rarely « sell » recommendations: in the year 2000, for example, less than 1% of all Wall Street brokerage house analysts' recommendations were « sell » or « strong sell » recommendations. In fact all analysts at investment banks tread a thin line and are caught in potential conflicts of interest. On the one hand, investors, their major clients, want « sell-side firms » to give honest opinions and be successful over time. On the other hand, an analyst's objectivity and independence can be threatened by several potential conflicts of interest, most of them stemming from the blurring of the lines between research and investment banking [5].

Several factors can shape the investment recommendation as stressed by the US Securities Exchange Commission (SEC): the analyst's firm may be underwriting the offering of a company covered by the analysts ; client companies will prefer positive research reports therefore negative ones could damage the investment firm's efforts to build long term and lucrative client relationships with a corporate or a sovereign; analyst compensation and bonuses can be linked to the number of deals done; and last but not least, the broker, the analyst or any other employee in the firm may own interests in the company covered. A US SEC Staff analysis released in 2001 of nine Wall Street firms found the following: seven of them reported that « investment banking had input into analysts' bonuses and the analyst hiring process »; although there is no formal supervision of analysts by investment banking « it is well understood by all these analysts that they were not permitted to issue negative opinions about investment banking clients »; in a total of 308 out of 317 IPOs examined, the firm that underwrote the security also provided research coverage [6]; and finally «about one quarter of the analysts inspected own securities in companies they cover ». The interest of US regulators in analysts' conflicts of interests prompted the industries associations to provide answers. The Securities Industry Association, for example, issued in 2001 a « best practices for

[5] As underlined by Laura Unger, acting chair of the US Securities & Exchange Commission, « The blurring can be seen in a number of ways. First an analyst's salary and bonus may be linked to the profitability of the firm's investment banking business, motivating analysts to attract and retain investment banking clients for the firm. Second, at some firms, analysts are accountable to investment banking for their ratings. Third, analysts sometimes own apiece of the company they analyze, mostly through pre-IPO share acquisitions », Laura Unger, « Testimony concerning conflicts of interest faced by brokerage firms and their research analysts », Testimony before the *US House of Representatives Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises, Committee on Financial Services*, July 31 2001, available at http://www.sec.gov/news/testimony/073101tslu.htm and http://www.house.gov/financialservices/080201lu.pdf

[6] The impact of investment banking relationships on analysts' stocks recommendations in the context of initial public offerings (IPO) has been also analyzed by Roni Michaely and Kenk Womack, « Conflict of interest and the credibility of underwriter analyst recommendations, » *Review of Financial Studies*, 12, 1999, pp. 653-686.

research » in order to consolidate the « integrity of research » recommending for example that research should not report to investment banking and that analysts should not be directly linked to specific investment banking transactions [7]. At the same time, firms started reviewing their internal procedures to manage conflicts in a response to increasing pressure from former clients. Several of them, from Credit Suisse First Boston to Merrill Lynch, started in 2001 to adopt policies prohibiting analysts to own securities in companies they covered [8].

Analysts do not only face a myriad of conflicts of interest. Most worrying is the predictive imperative they face. Here the paradox is that, in spite of academic studies pointing to lack of efficiency, research departments of brokerage houses continue to spend large amounts of money on research analysis. They are not, however, totally wrong in doing so. It is true that the financial industry during the 1990s experienced a dramatic change with the boom of the investment banking business. This trend spreads the belief that analysts became increasingly focused on attracting clients rather on writing independent reports. The answer is partly true if we take into account that « sell » or « strong sell » recommendations almost disappeared. However, some academic research is helpful to nuance this perception.

Two recent academic studies pointed to this change and underlined that, during the period of 1986-1996 (a time with less influence from investment banking) [9], sell-side recommendations had significant value, and the same also applies for the period 1996-2000. In fact, according to a study based on First Call data recording 160 000 real-time recommendations made by 299 brokerage houses [10], most highly rated stocks outperformed the less favourable ones during all the period 1996-2000 and this in every year but one : in 2000, the trends were very different and the reverse is true. During this period, analysts became increasingly positive with the percentage of « buy/strong buy » recommendations jumping from 65% to more than 70% over the period analyzed. Above all, this research underlines a singular behaviour for 2000, reversing the one prevailing during the previous years. The most highly recommended stocks in 2000 returned 31.2 % less than the market, on average, while the least favourably recommended stocks gained almost 49 % more than the market. This data also confirms the very few « sell/strong sell recommendations » found by previous studies : the percentage of negative recommendations on stock fell from 3,4% in 1996 to a mere 1,8% in 2000, meaning that nearly to negative opinion is being issued by analysts.

[7] See Securities Industry Association, *Best practices for research*, New York and Washington, SIA, 2001.
[8] See « Credit Suisse limits holdings of its analysts », *Wall Street Journal,* July 25 2001, at C14 ; « Merrill alters a policy on analysts », *Wall Street Journal*, July 11 2001, at C2.
[9] See Brad Barber, Reuven Lehavy, Maureen McNichols and Brett Trueman, « Can investors profit from the prophets ? Security analyst recommendations and stock returns », *The Journal of Finance*, vol. 56, n° 2, April 2001, pp. 531-563.
[10] See Brad Barber, Reuven Lehavy, Maureen McNichols and Brett Trueman, « Prophets and losses: reassessing the returns to analysts' stock recommendations », *Stanford University*, *Graduate School of Business Research Paper Series*, n° 1692, May 2001 (unpublished).

Another line of research has being trying to foresee if analyst recommendations tend to have an impact. Here again, the bulk of the research has been heavily concentrated in developed countries. As for the previous questioning, there has been fewer, not to say no analysis conducted on emerging markets. Some papers focused for example on trading activities on security analyst recommendations, finding that both large and small traders tend to react to these recommendations (Mikhail, Walther, and Willis, 2005). Prior work has also documented that market reaction to upgrades is less pronounced than the market reaction to downgrades by analysts (see Asquith, Mikhail, and Au, 2005; Hirst, Koonce, and Simko, 1995; Jegadeesh, Kim, Krische, and Lee, 2004; Womack, 1996). All of this research has been focused on developing countries.

Not all analysts and brokerage houses are equals. Investment banks and securities houses differ in their strategies, structures and performances. Individual analysts differ also according to their « performance », some being more appreciated than others for their recommendations. In general, buy recommendations of the largest brokerage houses tend to outperform those of the smallest by about 3% annually on a market-adjusted basis[11]. Because of their closer ties with corporate management or sovereign officials, their greater resources to support research and their larger number of analysts, bigger investment firms tend to outperform their smaller counterparts. The analyst forecast accuracy tends to increase with the size of the investment boutique to which the research analyst belongs, not only because the biggest investment houses tend to hire the best analysts but also because they offer them greater resources to carry out their research (databases, bloombergs, etc.). You can be the best analyst and be off the map simply because you do not belong to one of the top institutions. You can also be the best analyst but remain unknown because your research is not referenced in the media, newspapers or research providers like Bloomberg, Reuters, Investext or Multext). Lastly, depending on the type of firm you are working for, your track record can be better or worse, depending whether you are in the sell side industry or in the buy side (Brown, Hugon and Luo, 2006).

In spite of the amount of literature on broker recommendations, analysts' bias, and fund managers' relations, very little has been written on emerging markets. Among the rare research devoted to emerging markets (Santiso, 2003), some papers underline that there is strong evidence that foreign financial analysts outperform local analysts in these markets, as they tend to produce more timely and more accurate forecasts (Bacmann and Bolliger, 2001; Seasholes, 2000) [12]. In a recent paper Seasholes investigated information asymmetries in emerging stock markets and found that there was little evidence that locals were better informed than foreigners and there is evidence that foreign investors

[11] See Brad Barber, Reuven Lehavy and Brett Trueman, « Are all brokerage houses created equal ? Testing for systematic differences in the performance of brokerage house stock recommendations », University of California at Davis and University of California at Berkeley, March 2000 (unpublished). This research shows also that surprisingly smaller brokers tend to make twice as much « sell » recommendations than the biggest investment boutiques (14% of sell/strong sell against 6% for the big brokers houses during the period studied 1986-1998). The smallest brokers tend also to have superior « sell » recommendations than their bigger competitors, this may be linked to the fact the big broker houses have stronger interests and incentives for preserving existing or potential client relationships).

[12] Bolliger finds however that local houses in Europe have an advantage over foreign ones (Bolliger, 2004), sharing the same kind of results as other studies on OECD countries (Orpurt, 2004).

can outperform locals when trading specific stocks (Seasholes, 2004). Other studies, using a sample of 32 countries, among them some emerging ones, tend to find on the contrary a local advantage for the period 2001-2003 and in particular US investors tend to underweight a country's stocks more in their portfolio if that country has a higher analyst local advantage (i.e. countries where earnings are smoothed more and less information is disclosed by firms) (Bae, Stulz and Tan, 2005).

During the 90s, the emerging equity markets industry boomed, with the number of stocks covered rising from 150 to nearly 500 between 1993 and 2000, according to some estimates (Bacmann and Bolliger, 2001). The number of brokers covering emerging stocks also increased (from 66 to 170) as well as the number of analysts (from around 260 to more than 1650 for the same period). The average number of analysts employed by foreign brokerage houses amounted to 8 while the average was 5.5 for local ones. Local analysts tended however to be more active, producing forecasts every 76 days (while their foreign peer produced every 71 days) and changing their firm forecasts on average 1.5 times per firm each year (against 1.16). As shown also by another study, the variation of analysts per country varies a lot: while South Africa has only 3 firms and Brazil has 23, the former had 126 analysts covering stocks (85 of them foreign) and the latter only 28 (11 of them foreign) (Bae, Stulz, and Tan, 2005).

Other micro-focused studies analyzed individual investor behaviour (for example the 90 500 actively investing individuals within the People's Republic of China by the beginning of the 2000s, Feng and Seasholes, 2003) and mutual funds investment strategies in emerging markets (Schmukler et al., 2004) or the extent and accuracy of analyst activity across 47 countries (15 of them emerging markets) (Chang, Khanna, Palepu, 2000).

All in all, studies focused on emerging markets analysts, brokers and investors tend to be scarce. When they exist, they are concentrated on equity markets. None as far as we know investigated the confidence game within emerging bond markets. This is in fact quite surprising when compared to the density of studies issued on financial analysts over the past years. Since 1992 no less than 250 papers related to financial analysts have been published in the nine major research journals, one of the most complete reviews of the literature (Ramnath, Rock, and Shane, 2006).

Our study proposes to cover this gap. We used untapped and rich datasets, entirely built on their own, as explained in the following section. We wanted first to determine whether bond analyst recommendations are biased and depend first on the underwriting mandate and second on the size of a specific country's bond market. The second objective of the paper was to study the impact of investment banks' recommendations on fund flows. In other terms whether these analyses are relevant or useful to understand capital flows towards emerging economies. For that we constructed a unique database covering the period 1997-2006 for all the bond recommendations by

the major Wall Street and City brokerage firms dominating the emerging bond markets, and more precisely the Latin American segment where we focused our attention, the region being the most active in bond markets.

3. Description of the data

In this section we present the source and the relevance of the data used for this paper. The data could be divided into three different types. Firstly, we have the information provided by brokerage houses to investors about the sentiment vis-à-vis an emerging economy. Secondly, we employ data related to the structure of the Latin American Bond Market. More precisely, we use issues, size of each country in the market and credit risk given by the market to emerging countries. Finally, we have taken some macroeconomic variables of Latin American economies such as capital flows, economic activity, interest rates, exchanges rates and inflation rates.

The most important and innovative aspect of our paper is the construction of a new untapped database containing the recommendations given by the major investment banks of the Latin American bond markets. Indeed, this is the first publication that studies the impact that investment banks' recommendations may have on Latin American Capital Markets. By using simple statistical analyses we give a primer result of the impact of research publications on emerging capital markets.

For this purpose we have used the publications produced by the major investment banks operating in emerging markets. In their monthly or quarterly publications they published the recommendation for each emerging country, giving their recommendations to the clients, namely the "buy side" industry of asset managers, mutual funds, hedge funds, pension funds, etc. An interesting point is that these publications are only available for clients and are not therefore public information. Indeed, they represent a direct and strict link between financial intermediaries and investors. We managed to build the database for 10 brokers, all of them dominant players in emerging bond markets as underwriters. All of them are from developed countries' brokerage houses, which are in fact the market makers: ABN AMRO, Barclays Capital, Citibank, Credit Suisse First Boston (now Credit Suisse), Deutsche Bank, Goldman Sachs, JP Morgan, Lehman Brothers, Merrill Lynch, Morgan Stanley.

The period of the recommendations that we have used goes from July 1997 to March 2006[13] and the number of recommendations is over 3,300 [14]. As shown in table 1, we have taken 11 emerging countries for this research. Indeed they are the Latin American countries that are studied in these publications and that represent more than 90% of the GDP of the region. They also concentrated over the period the major bond issuers within the emerging market asset class. With regard to investment banks, our

[13] In fact, for the period July 1997 - December 1999 we only have information from Citibank.

[14] Most of these publications are realized on a monthly basis (see Annex 1). In order to compare the recommendations provided by investment banks, we have defined a specific month From the 20 of each month (not included) to the 20 of the next month (included). For example July is from 21 June until 20 July.

database is constructed from 10 investment banks which represent more than 80% of the investment banks present in the Latin American sovereign IPOs.

The frequency of these publications is in most cases monthly, and the recommendations that we have used are those given to sovereign external debt. In order to compare the view of each bank towards Latin American countries at the same time, we have classified three types of recommendations, which are Overweight (that takes the value of 1), Neutral (0) and Underweight (-1), assimilated to the cases of buying, maintaining and selling with respect to an index (e.g. EMBI+ calculated by JPMorgan). This means that given portfolio restrictions, a buying recommendation must be compensated by a selling advice, implying that investment banks are constrained to underweight countries in the composition of the portfolio when they have a favourable view of a particular country. In annex 1, we give an example of the research publication's recommendations given by one of the largest investment banks present in Latin America

Table 1

INVESTMENT BANKS' RECOMMENDATIONS DATABASE. NUMBER OF OBSERVATIONS (July 1997- March 2006)

	ABN	BARCLY	CITI	CSFB	DB	GS	JPM	LB	ML	MS	TOTAL
Argentina	14	4	69	56	50	24	59	19	18	26	339
Brazil	11	14	73	58	50	25	58	19	27	25	360
Chile	11	14	78	58	0	25	55	19	0	0	260
Colombia	11	15	77	58	50	25	59	19	26	25	365
Dom. Rep.	0	0	9	0	0	2	42	0	27	15	95
Ecuador	1	15	76	58	50	25	59	19	27	24	354
Mexico	11	15	78	58	50	25	59	19	27	24	366
Panama	0	14	61	58	49	25	58	0	27	24	316
Peru	1	14	78	58	50	25	59	19	27	24	355
Uruguay	0	0	21	57	0	16	52	19	27	0	192
Venezuela	11	13	81	58	50	25	59	19	27	24	367
TOTAL	71	118	701	577	399	242	619	171	260	211	**3369**
Part. Underwriting	2%	2%	12%	7%	10%	10%	22%	0%	6%	13%	**84%**

Source: The authors from investment banks' publications (for recommendations) and Bloomberg (for underwriting), april 2006

In order to compare these recommendations with one of the most important businesses of investment banks in emerging countries, we have constructed a database that contains the Latin American Sovereign Bond Issues from January 1999 to March 2006. The source of information was *Bloomberg* which, among other things, includes the lead managers (or underwriters), the amount outstanding, and the issue and maturity date of each issue. The most important reason for choosing *Bloomberg* as a source of information is that their database is one of the most important benchmarks for market-makers in relation to the list of leaders in the underwriting business. Indeed, the "League Table" calculated yearly and from 1999 by *Bloomberg* represents an important guide for investors, issuers and actors about the reputation (measured as the market share) of each investment bank[15]. In order to define the issues that can be included in this "League Table", *Bloomberg* has specified the characteristics of these issues.

[15] See Bloomberg Markets (2006) for a detail of the relevance for the market of the information provided in that database.

As shown in table 2, the data used is composed by 411 underwriters and corresponds to 250 sovereign issues.[16] In particular, almost 75% of the underwriters are located in Brazil, Argentina, Colombia and Mexico. More interesting is that Argentina, in 1999, had to use 60% of the underwriters presented that year in Latin America in order to place a huge number of bonds, which in fact complicated even more the resolution of the Argentinean crisis. In 1999 alone, Argentina issued a total of 52 bonds, compared with 17 for Brazil and 8 for Mexico. The most active issuer in our sample over the period studied is also the largest economy of the region, namely Brazil, which happens to be also the most liquid Latin American market.

Table 2

Number of Lead Managers (Latin American Soverreign Bonds Issues).

	1999	2000	2001	2002	2003	2004	2005	2006 march	TOTAL
Argentina	52	21	5						78
Brazil	17	21	12	8	8	12	18	6	102
Chile	2		2	5	2	2			13
Colombia	5	12	24	4	5	5	9		64
Dom. Rep.			2		2			2	6
Ecuador							2		2
Mexico	8	7	8	6	12	9	5	2	57
Panama	2	2	3	2	1	3	2		15
Peru				4	4	2	5		15
Uruguay	1	4	10	2			6	4	27
Venezuela		2	10		4	7	9		32
TOTAL	87	69	76	31	38	40	56	14	**411**

Source: The authors from Bloomberg, april 2006

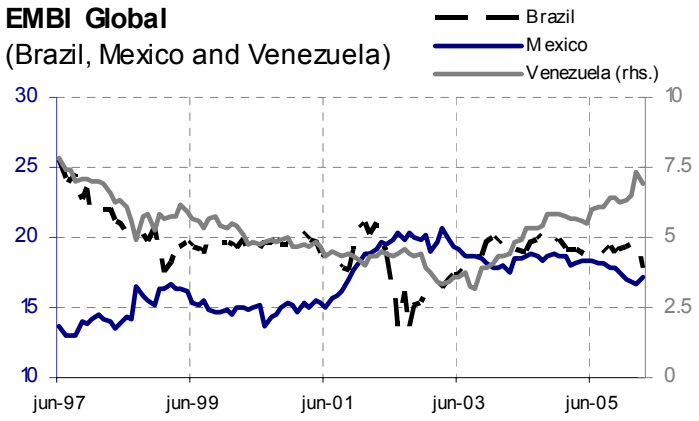
With the purpose of studying the size of the bond market for each Latin American Country, we took the weight of each country in the JP Morgan Emerging Markets Bond Index Global (EMBI Global). This index is a reference of the bonds stock for market-makers, financial researchers and policy makers, which are, for each country, placed in the secondary market.

The countries that are included in that index have been - during two consecutive years - low/middle income countries (as defined by the World Bank). Concerning the characteristics of the securities, only bonds that have an issue size higher than US$500 millions and a maturity of at least 2.5 years are incorporated in that index[17]. As it is noted by JP Morgan Securities (2004), "the weight of each instrument in the EMBI Global is determined by dividing the issue's market capitalization by the total market capitalization for instruments in the index." Therefore "country weights for the EMBI Global are easily calculated by aggregating the weights of the instruments for each country".

[16] Indeed, the number of Lead Managers used today for most of the Latin American Emerging Bond Issues is two.
[17] For a more detailed description of the construction of that index, see JP Morgan Securities (2004).

In figure 1 we have the market weight of the three principal Latin American countries that compose that index today. Brazil and Mexico are by far the largest Latin American Bond Issuers (nearly 35% of the total index). Indeed, they represent more than 60% of the Latin American Weight of that Index. Argentina nearly disappeared after 2001 and its massive default but one year before it was still a major heavyweight, representing nearly a quarter of the total index.

Figure 1



Source: JP Morgan, april 2006

To calculate the perception of investors towards country credit risk, we have employed the spread of the EMBI Global which is measured as the credit risk premium over US Treasury Bonds and it is calculated as the difference between the yield to maturity bond and the yield to maturity of the corresponding point on the US treasury spot curve. For the country weights and the spreads we had information on a monthly basis from 1997 until today for the most important bond issuers in the region. In contrast, for Chile, Dominican Republic and Uruguay the period starts in June 1999, October 2001 and June 2001 respectively.

With the aim of studying the impact of investment banks' recommendations on capital flows, we have used the database created by the Boston based private consulting firm *Emerging Portfolio Fund Research* which is constituted by the percentage allocated in each emerging country by funds.[18] We then possess information on the country average weightings of all funds that invest in Latin American Equity and Bond Markets. The most important advantage of this database is that it contains information on a monthly basis about what differs with respect to other databases, such as the CPIS (Coordinated Portfolio Investment Survey sponsored by the IMF)[19] that includes portfolio investment assets on an annual basis and is produced by multilateral organizations (IMF, BIS, OECD and WB).

[18] See http://www.emergingportfolio.com for a detailed description of that database.
[19] For more information about this database see http://www.imf.org/external/np/sta/pi/cpis.htm

Concerning equity flows, the period that we have used starts in July 1997 and ends in January 2006 for most of the Latin American countries of our sample[20]. In contrast, the bond flows database is constituted only from April 2002 and ends also in January 2006[21].

In order to test the impact of investments banks' recommendations on capital (bond and equity) flows, we have used some macroeconomic variables as control variables. These variables are on a monthly basis and are economic activity growth, inflation rate, exchange rate, interest rate and the spread of the EMBI Global. The sources of information of these variables are *Bloomberg* and *Financial Thomson Datastream*, and cover the period June 1997 – January 2006.

For the case of economic activity growth, for some countries (e.g. Brazil and Colombia), given there is no monthly indicator of economic activity, we have taken as proxy industrial production due to the strong relationship between this variable and GDP. For the case of Venezuela, given the lack of a robust monthly indicator we have transformed GDP (that is calculated on a quarterly basis) on a monthly basis. For that, we have used Boot, Feibes, and Lisman (1967) methodology that consist of minimizing the sum of squares of the second differences. Concerning the other macroeconomic variables we have used the most relevant indicator for each country[22].

4. Investment banks' business and research publications

In this section we present some empirical evidence of the relationship between investment banks' recommendations and some aspects related to the business of these banks (in particular sell-side business). This section gives some preliminary results in order to understand whether banks' advice to investors is biased. For that, we first analyzed the recommendations given by underwriters during the announcement date of an IPO. Secondly, we studied the possible impact that the market size of an emerging country could have on the recommendation given by banks.

4.1 Underwriters' recommendations: a simple statistical analysis

With the aim of investigating possible incentives that investment banks could have to concede a favourable recommendation to a specific emerging country, we have studied the behaviour of investment banks during sovereign bond issues. More specifically, we have integrated underwriters of the Latin American bonds issues with their recommendations, in order to analyze their recommendations in an IPO.

[20] For Ecuador and Panama, we have information only from February 2005 and for Dominican Republic and Uruguay there is no information for equity flows.
[21] For Dominican Republic the information provided for bond flows only starts in July 2004.
[22] For the case of interest rate, for instance, for Argentina we have used *Prime rate 30 dias*, For Brazil *Selic rate*, for Chile *Tasa de Politica Monetaria*, for Colombia *DTF*, for Mexico *Cetes 28 dias*, for Peru *Interbank Interest Rate* for Venezuela *TAN*.

Our database is composed of 160 underwriters' recommendations during approximately seven years (July 1999- March 2006). By giving the value of 1 to overweight recommendations (buy advices), 0 to neutral recommendations (maintain the same percentage of an asset in the portfolio) and -1 to underweight recommendations (sell advices), we have constructed a database that allows us to give a first simple result on whether investment banks' recommendations are biased and therefore dependent on the IPOs business. As we have noted before, given portfolio restrictions, these recommendations can not be overweight for all countries; a favourable recommendation for one country has to be compensated with a pessimistic view of another country.

Table 3

Underwriters' recommendations (Announcement date of the issue)
Jan. 1999 - March 2006

	OVER.	NEUTRAL	UNDER.	OBSERV.
Argentina	0%	67%	33%	9
Brazil	59%	41%	0%	37
Chile	20%	60%	20%	5
Colombia	35%	65%	0%	31
Dom. Rep.	0%	100%	0%	2
Ecuador	50%	50%	0%	2
Mexico	29%	55%	16%	31
Panama	0%	71%	29%	14
Peru	46%	38%	15%	13
Uruguay	0%	100%	0%	1
Venezuela	67%	27%	7%	15
TOTAL	**38%**	**52%**	**10%**	**160**

Source: The authors from Investment Banks' recommendations and Bloomberg, april 2006

In table 3, we present the recommendations given by banks that have been underwriters for Latin American sovereign bond issues. The most important and relevant result is that 90% (i.e. 144 of 160) of the underwriters recommend, at the announcement date of the issue, to buy or to maintain in their portfolio the bonds issued by the countries where they are acting as lead managers. Indeed, given that only 10% of the recommendations are negative, we could note that banks' recommendations are biased and depend on the underwriting process in which banks are involved.

By analyzing each Latin American country, all of them (except Argentina and Panama) have a higher percentage of optimistic underwriters' recommendations than pessimistic recommendations.

The Argentinean case is very useful and interesting. All the issues that we have included were previous to the 2001 Argentinean Default and some of them just a few months before the crisis. It is worth pointing out that even if we have not noted an overweight recommendation, 67% of the recommendations were to maintain the positions in Argentinean External Debt, even in the months previous to the default.

Indeed, some of the comments given by banks months before the crisis were, at least, unrealistic and biased, given that macroeconomic perspective was unsustainable [23].

By analyzing the first three countries where we have the higher number of observations (Brazil, Colombia and Mexico) or underwriters' recommendations, we note that for all of them, underwriters have, in most cases, a positive view about the country (100% for Colombia and Brazil, and 84% for Mexico). By analyzing underweight recommendations, Brazil and Colombia have never obtained a pessimistic view from brokers (even though Colombia once lost its investment grade), and in Mexico less than 2 out of 10 recommendations were pessimistic. Therefore, it is clear from empirical evidence that during the last years banks' recommendations were favourable in regard to the country for which they acted as underwriters.

What is the incentive for underwriters to give a favourable recommendation at the announcement date of an issue? Firstly, positive recommendations could have an impact on the success of the "book-building" process in which underwriters are designated to place the bonds through institutional investors. If your view is positive or at least neutral of the country, your likelihood of getting the mandate will probably increase. The refutation of this hypothesis would be that brokers recommending to sell a sovereign could get an underwriting mandate.

Secondly, because one of the roles of underwriters is to participate in the secondary market to stabilize the price and avoid volatility of the new issue[24], by giving favourable advice to investors regarding external debt issued, underwriters could send positive signals about that country and then avoid a decrease in the price[25].

In order to prove that underwriters' recommendations are biased and depend on the sell side business of investment banks, we have compared these recommendations with recommendations given by other investment banks during the announcement date of the issue of a bond.

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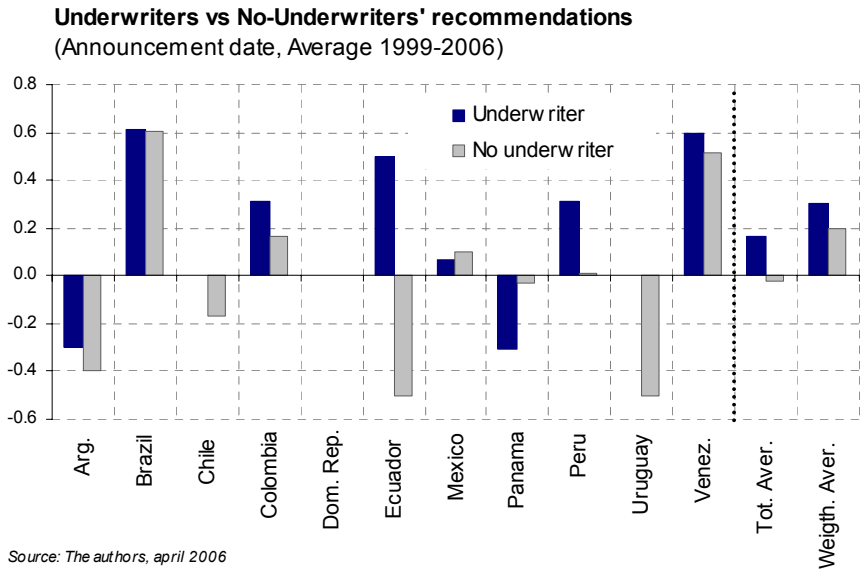
[23] Here we impart some of the biased views concerning the Argentinean Crisis. Credit Suisse First Boston:
"Argentina. Remain market-weight. We believe the expected debt exchange will be a key driver of Argentine asset prices during the month"…. "Over the next month we expect to see many more specifics of the economic program, both on the fiscal side – to be released in the IMF Letter of Intent – as well as on the deregulation front, which should reduce uncertainty." CSFB May 2001 and "The successful debt exchange in Argentina should give the market some stability in the near-term horizon, which should be most beneficial to Brazil." CSFB June 2001. Salomon Smith Barney: "The successful implementation of the IMF support package — with the associated debt management transactions — and the change in the global outlook probably increases the chances that economic activity will pick up in the second half of the year. We therefore recommend a neutral position in external bonds and local currency instruments." Salomon Smith Barney January 17, 2001 JPMorgan: "Argentina: Marketweight. Favorable technicals underpin our portfolio allocation this month. ." JP Morgan 5 April 2001 and "Argentina: Marketweight. The improved near-term outlook appears mostly priced in, although we like the short end of the curve from a relative value perspective." JP Morgan 8 February 2001. Morgan Stanley: "We are maintaining our Market Perform recommendation on Argentine bonds….Relaxation of fiscal targets and an innovative IMF-led financial package from creditors both improve Argentina's credit outlook. Argentina needs to raise an estimated $2.6 billion to fulfil its first quarter financing requirements. New issues are expected to total $5.6 billion in 2001. Growth and fiscal performance are becoming the focus of investors' attention." Morgan Stanley January 26, 2001

[24] As it is noted on the prospectus of the bonds, although the underwriter is not obligated to make a secondary market for the bonds, it plans to make one: "The issuer has been advised by the underwriters that the underwriters intend to make a market in the global bonds but are not obligated to do so and may discontinue market making at any time without notice. No assurance can be given as to the liquidity of the trading market for the global bonds."

[25] it would be interesting to analyse the impact of recommendations on the secondary market price of sovereign bonds. With respect to that subject, some important studies have been developed in the US equity market.

As shown in figure 2, on average (period 1999-2006), for all countries underwriters' recommendations to Latin American countries are higher than or at least equal to no-underwriters' recommendations. Additionally, by taking the weighted average, underwriters' recommendations are 25% larger (0.3 vs. 0.2) with respect to those of No-Lead managers. This is particularly the case for Colombia, Ecuador, Peru and Venezuela. Interestingly, in the case of Brazil, the biggest and most liquid market, such a bias is less marked, while in the case of Mexico it is the opposite.

Figure 2



Moreover, by comparing the recommendation made at the announcement date by underwriters and no-underwriters, we discovered that 75% of the lead managers' advice was higher than or equal to that made by other investment banks during 1999-2006 and for a sample of 149 recommendations[26]. In particular, as we can see in table 4, for all countries excluding Panama, with respect to no-underwriters' recommendations, the percentage of higher underwriters' recommendations was superior to lower underwriters' recommendations.

[26] This sample is less than this one used for total recommendations (149 vs. 160) because in some bond issues (mostly at the beginning of the period) we obtained only the recommendation of the underwriter and not those of other investment banks.

Table 4

Underwriters' recommendations vs.
Other investment banks' recommendations (1999-2006)

	HIGHER	EQUAL	LOWER	OBSERV.
Argentina	20%	80%	0%	5
Brazil	39%	33%	28%	36
Chile	20%	60%	20%	5
Colombia	28%	62%	10%	29
Dom. Rep.	0%	100%	0%	2
Ecuador	100%	0%	0%	2
Mexico	39%	29%	32%	28
Panama	8%	46%	46%	13
Peru	54%	8%	38%	13
Uruguay	100%	0%	0%	1
Venezuela	53%	27%	20%	15
TOTAL	**36%**	**39%**	**25%**	**149**

Source: The authors from Investment Banks' recommendations and Bloomberg, april 2006

By analyzing the results showed in the precedent paragraphs we obtained two interesting findings. First, given that a large part of underwriters' recommendations are positive, it suggests that they are biased and depend on the sell side business. Second, despite the fact that in most cases lead managers' recommendations are higher than or equal to no-lead managers' advice, this result is less evident than the first finding. Therefore there is a remaining question that is related to the incentive that no-underwriters could have to give an equal or better recommendation than underwriters. For that we have analysed the structure of the underwriter in Latin America.

In table 5 we present the participation of the underwriters in the Latin American Sovereign Bond Market. As noted before, the number of underwriters in the Sovereign Bond Market is small. Indeed, for most of the Latin American countries, during 1999-2006, 90% of the issues are realized by 10 investment banks. However, from the point of view of governments, we observe a diversification in the choice of underwriters, which results in a change over time of the underwriters with the purpose of reducing the dependence to a single Lead Manager. In the major countries' issuers (Argentina, Brazil, Colombia, Mexico, Uruguay and Venezuela), the market share of a lead manager does not exceed 30%, which corroborates that there is no specific leader in the underwriter market, at least for the most important countries' issuers.

Table 5

Participation (%) of the underwriters in Latin American Countries (Jan. 1999-March 2006)

	# Issues	ABN	BARCLY.	C	CSFB	DB	GS	JPM	ML	MS	UBS	TOTAL
Argentina	53	1.0	1.4	7.7	9.9	17.3	6.2	19.2	2.3	17.6	0.0	82.7
Brazil	53	0.9	0.4	10.9	4.2	9.4	12.0	16.9	9.1	12.9	5.1	81.7
Chile	7	0.0	0.0	31.2	0.0	25.1	0.0	37.0	6.7	0.0	0.0	100.0
Colombia	41	4.1	0.0	15.0	12.3	4.0	14.4	20.0	12.7	12.5	1.3	96.3
Dom. Rep.	3	0.0	0.0	21.4	0.0	0.0	0.0	50.0	0.0	28.6	0.0	100.0
Ecuador	1	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	100.0
Mexico	35	0.0	6.0	9.9	5.7	4.9	15.7	30.1	1.0	13.5	4.1	90.9
Panama	11	0.0	0.0	39.9	0.0	5.0	3.5	16.9	0.0	34.6	0.0	100.0
Peru	10	0.0	0.0	24.0	4.8	13.5	0.0	41.8	4.8	3.8	7.2	100.0
Uruguay	18	1.4	0.0	19.2	6.9	18.6	0.0	13.3	11.9	7.8	16.0	95.2
Venezuela	17	20.6	3.4	2.9	20.6	14.0	0.0	14.9	3.4	0.0	9.7	89.5

Source: The authors from Bloomberg, April 2006

Another way to arrive at a similar conclusion is by analyzing the concentration of the underwriting market (table 6). By calculating the Herfindahl-Hirschman Index (HHI)[27] for each Latin American Country during 1999-2005 (see table 5), we obtained two important results. Firstly, despite the fact that the underwriting concentration in the Latin American Bond Market could be considered by the U.S. Department of Justice as highly concentrated[28], given the reduced number of actors, the concentration index is not so elevated. Secondly, during the last seven years, we note that the concentration has remained stable (around 0.22) and we have seen neither an increase in the number of actors in this game nor an increase in the participation of a single underwriter.

Table 6

Concentration (Herfindahl-Hirschman Index) in the Underwriting Market

	1999	2000	2001	2002	2003	2004	2005
Argentina	0.14	0.14	0.34				
Brazil	0.18	0.17	0.17	0.18	0.19	0.15	0.12
Chile	0.50		0.50	0.51	0.50	0.50	
Colombia	0.28	0.27	0.11	0.25	0.39	0.54	0.19
Dom. Rep.			0.50		0.50		
Ecuador							0.50
Mexico	0.24	0.29	0.33	0.18	0.26	0.14	0.21
Panama	0.50	0.50	0.53	0.50	1.00	0.50	0.68
Peru				0.38	0.36	0.53	0.22
Uruguay	1.00	0.53	0.14	0.53			0.31
Venezuela		0.50	0.50		0.41	0.20	0.28
Weighted Average	0.22	0.21	0.23	0.20	0.26	0.22	0.20

Source: The authors from Bloomberg, april 2006

[27] The Herfindahl-Hirschman Index (HHI) is a standard measure of concentration in Industrial Organization and is defined as: $HHI = \sum_{i=1}^{N} x_i^2$ where x_i is the participation rate of firm *i* in a market composed by *N* firms.

[28] The U.S. Department of Justice considers a market with a result of less than 0.1 to be a competitive marketplace; a result of 0.1-0.18 to be a moderately concentrated marketplace; and a result of 1.8 or greater to be a highly concentrated marketplace. See http://www.usdoj.gov/atr/public/testimony/hhi.htm

Theoretically, then Emerging Sovereign Bond Markets are characterized by an imperfect competitive market in which underwriters are playing a repeated game. By taking investment banks' recommendations as a marketing product, it is then advantageous to investment banks, given the dynamic of the "underwriting game", to recommend positively a country (or client) even if at that period they have not been underwriters.

Therefore, it is not sure that no-underwriters recommendations could be taken as a control variable to test if underwriters' recommendations are biased. In fact, this may explain why the result showed in table 4 (underwriters' vs. no-underwriters' recommendations) is less robust than that obtained by analyzing the percentage of positive underwriters' recommendations (table 3) to show that the recommendations are biased and depend on the Underwriting Market.

4.2 Size of the emerging markets and recommendations: empirical evidence and implications

In the last sub-section we have studied the relationship between investment banks' recommendations and the process of bond issues in the primary market. Here we study the possible influence of the size of the secondary bond market on investment banks' recommendations.

Indeed, in addition to the underwriting process, part of investment banks' business is also related to the bonds that have already been issued. Because one of the most important aspects for investment banks is the sale of portfolios to a large variety of financial intermediaries (mutual funds, pension funds, commercial banks, insurance companies,…), the stability asset prices that compose these portfolios is relevant. For that purpose, investment banks' publications may be a useful tool to influence the asset prices.

Concerning Emerging Bond Markets, it is evident that the percentage invested in these portfolios increases relative to the size of each emerging country. In order to calculate the relative size of each Latin American country in the Emerging Bond Markets, we have used the weight of each country in the EMBI-Global (Emerging Market Bond Index) that can be used as the magnitude in the Secondary Bond Market of each Latin American country.

The weight of each emerging country in this database is similar to that obtained in other databases. For example, by comparing the EMBI-Global with the Joint External Debt Hub (JEDH) database[29] which provides the stock of international debt securities, we get a high correlation between both weights for the Latin American Emerging Countries (0.70 and 0.98 by excluding Argentina).

[29] This database is jointly developed by the Bank for International Settlements (BIS), the International Monetary Fund (IMF), the Organization for Economic Cooperation and Development (OECD) and the World Bank (WB). See: http://devdata.worldbank.org/sdmx/jedh/jedh_dbase.html

In order to verify if investment banks' recommendations are biased and depend on the size of the market of each emerging economy, we have compared the EMBI-Global weight of each Latin American country with the average of the total investment banks' recommendations between July 1997 and March 2006. As shown in table 7, by realizing a simple cross-section analysis, we discovered that, excluding Argentina, there is a high correlation between investment banks' recommendations and the size of the markets (0.8 for 10 Latin American Countries).

Table 7

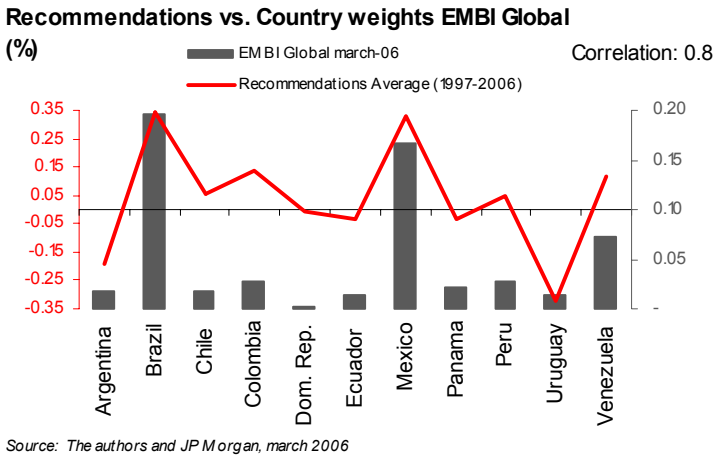
Recommendations vs. Credit Risk and Size of the Countries (Average 1997-2006)

	Average Recommendation	EMBI-Global country weights	EMBI-Global spreads
Argentina	-0.19	11.4	2620
Brazil	0.35	19.4	795
Chile	0.05	1.0	142
Colombia	0.14	2.2	508
Dom. Rep.	-0.01	0.3	686
Ecuador	-0.04	1.3	1426
Mexico	0.33	16.8	349
Panama	-0.03	1.9	384
Peru	0.05	1.7	497
Uruguay	-0.32	0.6	634
Venezuela	0.11	5.2	822
Correlation with recomm. (with Argentina)		**0.61**	**-0.40**
Correlation with recomm. (without Argentina)		**0.81**	**-0.14**

Source: The authors, from Investment banks' publications and JP Morgan, april 2006

Including Argentina the correlation is lower (0.6) because their size in the market was substantial (11.4%) *vis-à-vis* their recommendations (-0.19). In fact, if we compare the average of the recommendations for Argentina (1997-2006) with the present weight in the EMBI-Global (1.8% in March 2006), the correlation between both variables for the total of Latin American countries is 0.8 (see figure 3).

Figure 3



Source: The authors and JP Morgan, march 2006

The main result then is that as the size of the market increases the recommendation is more favorable. That is the case of Brazil and Mexico, whose market share in the Emerging market is the highest for all the emerging countries (19.4% and 16.8% respectively) and consequently their recommendations are the most elevated of our sample (0.35 and 0.33 respectively). By contrast, for countries which are less relevant in the Sovereign Bond Market, such as Dominican Republic or Uruguay (0.3% and 0.6% respectively of the total Emerging Bond Market), the recommendations are negative or at least neutral (-0.01 and -0.32).

In order to test, in a simple way, the robustness of this result, we have analyzed the relationship between investment banks' recommendations and credit risk[30]. Intuitively, if we assume that recommendations are unbiased and then objective, as credit risk is higher the recommendations would be more favorable. However, as is shown in table 7 column 3, we obtained that there is no correlation between both variables (-0.14 by excluding Argentina and -0.4 by including Argentina).

An interesting case is that of Chile, that it is well known today as an exceptional country from the point of view of macroeconomic soundness and stability. During the period that we have studied, the spread of the Chilean Bonds were on average 142 basis points over Treasury Bills, the lowest of Latin American countries. By contrast, their recommendations were below those of Brazil, Colombia, Mexico and Venezuela and close to neutral (0.05).

By using a simple statistical analysis, we have two main results in this sub-section. First, investment banks' recommendations are biased and depend on the relative size of the secondary bond market. By taking as analogy the famous term of "too big to fail" that refers to the case in which governments will bailout only financial intermediaries which are considered to be of "systematic" importance, we obtained a

[30] In order to calculate country credit risk, we have taken the spread of the EMBI-Global (JP Morgan), that it is in fact a proxy of the perception of the market about country credit risk.

similar result but in a contrary direction and that we call "too big to underwrite". Indeed, investment banks will not send negative signals to investors of countries or governments that are considered to be important for their business given their size in the market. Second, from this simple analysis, it seems that credit risk is not a relevant variable to determine the direction of the recommendations.

5. Emerging markets capital flows and investment banks recommendations: preliminary results

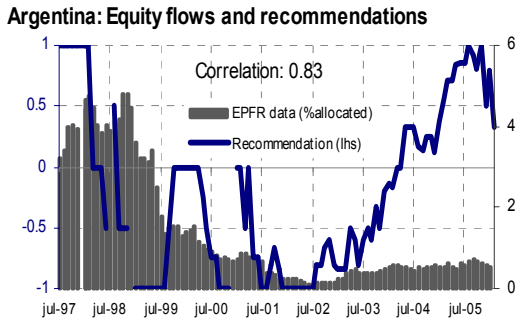
In the last section, from a simple statistical analysis, we have concluded that investment banks' recommendations are biased and depend on the business of these banks in emerging economies. Therefore, it is crucial to analyze the possible impact that these recommendations could have on emerging economies. In other terms, a remaining aspect is the impact that asymmetric information and imperfect microeconomic factors could have on investors' behaviour.

In order to answer this question we have studied the relationship between brokers' recommendations and fund flows in the most important Latin American economies (i.e. Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela). More precisely, on a monthly basis, we have taken the average of the recommendations given by investment banks for each Latin American economy and the percentage allocated by funds in these countries with respect to the total amount invested in emerging economies. Indeed, we preferred to use weighted flows instead of nominal flows with the purpose of studying the discriminatory role of investors among countries.

A first simple statistical analysis was to calculate the correlation between fund flows and brokers' recommendations. In the following figures (from figure 4 to figure 7) we showed, for instance, the case of Argentina and Brazil[31]. Concerning Bond flows, there is a positive and significant correlation with recommendations for both countries. By contrast, by analyzing Equity flows, for Argentina again there is a strong relationship with recommendations while for Brazil this partnership is less evident.

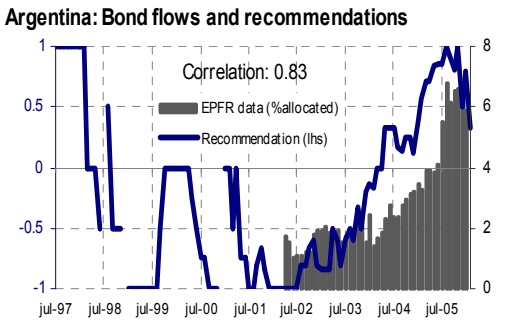
[31] As noted before, overweight recommendations take the value of 1, neutral outlook the value of 0 and underweight recommendations the value of -1.

Figure 4



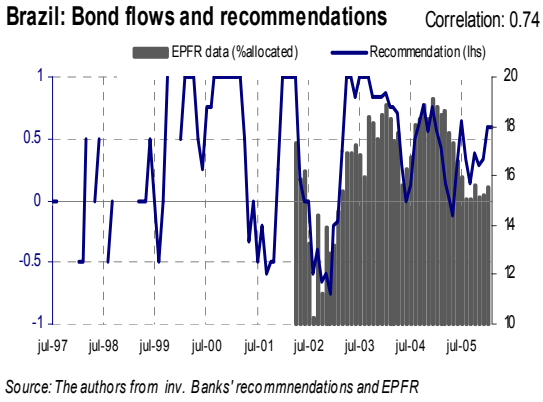
Source: The authors from inv. Banks' recommnendations and EPFR

Figure 5



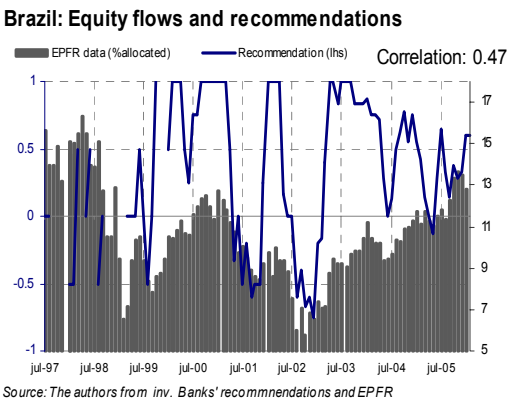
Source: The authors from inv. Banks' recommnendations and EPFR

Figure 6



Source: The authors from inv. Banks' recommnendations and EPFR

Figure 7



Source: The authors from inv. Banks' recommnendations and EPFR

In order to analyze the determinants of capital flows to Latin American emerging countries, we have realized a simple cross-section econometric model that uses, in addition to investment banks' recommendations (that may be considered as a microeconomic variable), macroeconomic variables.

These macroeconomic variables could de divided into two groups. First, we have taken variables whose trend can be directly influenced by financial intermediaries and are then defined by capital markets. These variables are the *spread* of Emerging Sovereign Bonds (over US treasury Bills) and the exchange rate. Second, we have used variables whose real sector is determinant to define their evolution and where financial intermediaries play an indirect role. These variables are economic activity, interest rate and inflation rate[32].

In order to test the impact of recommendations on capital flows (Equity flows and Bond flows respectively), we have used a panel data model that presents the following two basic equations:

[32] See section three for a description of the variables taken for each country.

$$Equity_{it} = \alpha + \beta \cdot \mathrm{Re}\, c_{it} + \delta \cdot Market_{it} + \gamma \cdot \mathrm{Re}\, al_{it} + \varepsilon_{it} \qquad \text{(i)}$$

$$Bond_{it} = \alpha + \beta \cdot \mathrm{Re}\, c_{it} + \delta \cdot Market_{it} + \gamma \cdot \mathrm{Re}\, al_{it} + \varepsilon_{it} \qquad \text{(ii)}$$

where Rec_{it} represents investment banks' recommendations given to country *i* in period *t*, $Market_{it}$ represents macroeconomic variables defined by capital markets (exchange rate and spread of sovereign Bonds) and $Real_{it}$ macroeconomic variables that are strongly influenced by real sector (economic activity, inflation rate and interest rate).

We started the estimation technique with the current practice, OLS estimation. Since these are known to deal inadequately with time series and cross-section heterogeneity, we reported also GLS estimates (random effects on countries).

Concerning Equity flows, results are presented in tables A1 and A2 and for Bond flows results are reported in tables B1 and B2. The results for Equity and Bond flows are too similar and can be summarized as follows.

By using OLS estimation, we find, as we would expect, a positive and significant effect of *Rec* and a negative and significant effect of exchange rate depreciation and spreads of bonds. Concerning *Real* variables, only economic activity has the expected sign but all of them are significant. By differentiating between *Market* and *Rec* variables with *Real* variables, the most important and relevant results are first that *Real* variables do not have a prediction capability to explain capital flows. Second, by analyzing only *Market* variables the prediction capacity is higher than using only *Real* variables. Finally, the impact of *Rec* on capital flows is important and increases the R-squared of the regressions. Indeed, *Rec* explains better capital flows than *Real* variables.

A second step of this analysis was to calculate the impact of lag explanatory variables on capital flows. We find the same results noted above. In particular, by analyzing only *Market* and *Rec* variables we obtain that they have a prediction capacity higher than *Real* variables. In addition, by associating first exchange rate and *Rec* and then by connecting exchange rate and spread we find that the first case has a higher R-squared.

By realizing a GLS estimation (random effects on countries), we have obtained the same results presented above. In summary, we find that variables that are determined by financial intermediaries (*Rec* and *Market*) play a crucial role to explain capital flows. In particular, by including *Rec* in the analysis, the results are more robust than before and the explanatory capacity of this variable is then more important than *Real* variables.

In conclusion, investment banks' recommendation is a determinant variable to explain capital flows. In particular, for most of the results shown in tables A1, A2, B1 and B2, we find that by including this new microeconomic variable, among macroeconomic variables, the robustness of the regressions improves considerably.

6. Conclusions

In order to analyze analysts and to determine the possible macroeconomic implications of investment banks' recommendations we have constructed a unique database covering the period 1997-2006 for all the bond recommendations by the major Wall Street and City investment banks that dominate the emerging bond markets. Indeed, we managed to build the database for 10 brokers, all of them dominant players in emerging bond markets as underwriters. All of them are from developed countries' brokerage houses, which are in fact the market makers.

In order to investigate if investments banks' recommendations are biased and are related to the banks' business we have first studied the structure of the primary bond market in Latin American countries and second the stock of bonds already issued by these countries and placed in the secondary market.

The most relevant results of that study are first that 90% of the underwriters recommend, at the announcement date of the issue, to buy or to maintain in their portfolio the bonds issued by the countries where they are acting as lead managers. Indeed, given that only 10% of the recommendations are negative, we could note that banks' recommendations are biased and depend on the underwriting process in which banks are involved.

Second, there is an additional bias. Investment banks' recommendations are biased and depend on the relative size of the secondary bond market, phenomenon that we call "too big to underwrite". Indeed, investment banks will not send negative signals to investors of countries or governments that are considered to be important for their business given their size in the market (e.g., Brazil and Mexico vs. Chile). Therefore, it seems that credit risk is not a relevant variable to determine the direction of the recommendations.

Given that these results reveal that signals sent by investments banks' to investors are imperfect and biased, we have studied a possible effect of these recommendations on emerging economies.

To that purpose, by using a simple cross-section analysis, we introduced recommendations as a new variable that could explain capital flows towards emerging economies. The most important result is that the impact of investment banks' recommendations on capital flows is more significant and more predictable than some macroeconomic variables such as interest rates, economic growth and inflation.

In summary, investment banks' recommendations are a biased microeconomic variable that explain, among other variables, capital movements and then could affect emerging economies' business cycles. It seems then that this new database is a useful and powerful tool to understand banks' and investors' behaviour. Therefore, it could be used for further research, for example, to ascertain the impact that electoral years could have on these recommendations.

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Annex 1. Citigroup Recommendations. March 22, 2006

Emerging Market Recommendations

Figure 39. Emerging Debt and Currency Markets — Local and External Market Recommendations

Country	Local Market Instruments[a]		Sovereign Foreign-Denominated Bonds
	Currency	Interest Rates	
Latin America			
Argentina			Overweight
Brazil	+		Overweight
Chile	–		Underweight
Colombia	+	–	Neutral
Dominican Republic	+		Neutral
Ecuador			Underweight
El Salvador			Neutral
Mexico	+		Underweight
Panama			Overweight
Peru			Neutral
Venezuela			Overweight
Europe			
Bulgaria			Underweight
Czech Republic	+	–	Neutral
Hungary	–	–	Underweight
Poland	+	+	Neutral
Romania	+	–	Neutral
Russia	+		Overweight
Slovak Republic	+	–	NA
Turkey	+		Neutral
Ukraine		–	Underweight
Africa/Middle East			
Algeria			Overweight
Côte d'Ivoire			Underweight
Egypt	+		Neutral
Israel	+	+	NA
Nigeria			Neutral
South Africa			Neutral
Asia			
China			Neutral
India			NA
Indonesia	+		Overweight
Korea	+		Underweight
Malaysia			Neutral
Philippines	–	+	Neutral
Taiwan			NA
Thailand	+		NA
Vietnam			Overweight

[a] For currencies and interest rates; "+" the instrument is likely to outperform forward markets; "–" the instrument is likely to underperform forward markets over the next 3-6 months, where market forwards are available; otherwise the symbols represent directional calls. NA Not Applicable. Source: Citigroup.

Latin America

Argentina. We favor an *overweight* position in sovereign external debt, and move to a *neutral* position on the currency. Tailwinds from the 9.2% GDP growth in 2005 that imply a statistical carry of 3.8% should leave 2006 GDP growth at 7.5 %. Lower February inflation reinforced our view that inflation risks are two-sided for 2006. Several factors could damp inflation, including price agreements, lower wage increases, and a lower-than-expected peso depreciation. Prudent fiscal and monetary policies will also be needed for inflation to surprise lower. Along these lines, the central bank's new sterilization policy should allow interest rates to increase gradually in coming weeks.

Recently, beef exports were banned for 180 days in an effort to reduce local prices. In our view, the measure is likely to be implemented only to a partial degree, but it has added regulatory uncertainty in an economy that is accumulating several micro imbalances that cloud the long-term country outlook.

TABLE A1

Impact of Recommendations on Equity Flows: OLS and Random Effects

Dependent variable: Equity	**OLS**								
	I	II	III	IV	V	VI	VII	VIII	IX
Rec	2.33			2.27					
	9.95			*8.91*					
Exchange Rate (*Market*)	-0.005		-0.003	-0.003					
	-16.84		*-15.45*	*-15.97*					
Spread (*Market*)	-0.0012		-0.0092	-0.0007					
	-10.8		*-7.66*	*-5.83*					
Inflation rate (*Real*)	0.05	-0.032							
	8.81	*-8.75*							
Economic Activity (*Real*)	0.104	0.07							
	4.68	*2.6*							
Interest rate (*Real*)	0.11	0.062							
	9.19	*4.41*							
Rec -1					2.37			2.58	2.31
					10.17			*10.39*	*9.09*
Exchange Rate -1 (*Market*)					-0.005		-0.003	-0.025	-0.00267
					-16.91		*-15.33*	*-14.96*	*-15.89*
Spread -1 (*Market*)					-0.001		-0.0009		-0.0006
					-10.82		*-7.59*		*-5.72*
Inflation rate -1 (*Real*)					0.516	-0.03			
					8.93	*-8.68*			
Economic Activity -1 (*Real*)					0.108	0.077			
					4.9	*2.86*			
Interest rate -1 (*Real*)					0.116	0.064			
					9.35	*4.53*			
Cons	3.76	3.18	5.82	5.22	3.7	3.12	5.8	4.46	5.18
	14.76	*10.23*	*27.33*	*25.04*	*14.6*	*10.03*	*27.11*	*26.27*	*24.82*
N	657	714	698	660	650	707	691	671	653
N-k	650	710	695	656	643	703	688	668	649
Adjusted R-squared	0.47	0.12	0.28	0.35	0.48	0.11	0.27	0.31	0.35

t- statistics are in *italic*

TABLE A2

Impact of Recommendations on Equity Flows: OLS and Random Effects

Dependent variable: Equity	**RE (GLS)**			
	I	II	III	IV
Rec	2.33			0.612
	9.95			*6.19*
Exchange Rate (*Market*)	-0.005		-0.0004	-0.0008
	-16.84		*-2.44*	*-4.35*
Spread (*Market*)	-0.0012		-0.0004	-0.0004
	-10.8		*-7.92*	*-6.82*
Inflation rate (*Real*)	0.05	-0.0056		
	8.81	*-1.14*		
Economic Activity (*Real*)	0.104	0.0216		
	4.68	2.37		
Interest rate (*Real*)	0.11	0.018		
	9.19	*2.98*		
Cons	3.76	3.27	4.01	4.05
	14.76	*1.86*	*2.32*	*7.99*
N	657	714	698	660
N-k	650	710	695	656
Adjusted R-squared	0.48	0.11	0.18	0.33

t- statistics are in *italic*

TABLE B1

Impact of Recommendations on Bond Flows: OLS and Random Effects

Dependent variable: Bond	**OLS**							
	I	II	III	IV	V	VI	VII	VIII
Rec	5.48			5.2				
	11.18			*9.21*				
Exchange Rate (*Market*)	-0.005		-0.002	-0.0025				
	-12.97		*-7.2*	*-9.55*				
Spread (*Market*)	-0.00175		-0.001	-0.0007				
	-10.59		*-5.95*	*-4.4*				
Inflation rate (*Real*)	0.0614	-0.022						
	7.51	*-3.51*						
Economic Activity (*Real*)	0.14	0.043						
	3.78	*0.87*						
Interest rate (*Real*)	0.2162	0.0627						
	9.74	*2.4*						
Rec -1					5.4			5.14
					10.94			*9.1*
Exchange Rate -1 (*Market*)					-0.005		-0.02	-0.002
					-12.71		*-7.18*	*-9.36*
Spread -1 (*Market*)					-0.0016		-0.001	-0.0007
					-10.1		*-5.84*	*-4.15*
Inflation rate -1 (*Real*)					0.06	-0.02		
					7.46	*-3.47*		
Economic Activity -1 (*Real*)					0.13	0.053		
					3.71	*1.08*		
Interest rate -1 (*Real*)					0.2	0.06		
					9.39	*2.34*		
Cons	6.49	5.96	8.92	8.28	6.54	5.94	8.91	8.25
	15.71	*10.21*	*20.86*	*21.42*	*15.73*	*10.26*	*20.73*	*21.12*
N	322	322	322	322	322	322	322	322
N-k	315	318	319	318	315	318	319	318
Adjusted R-squared	0.53	0.04	0.18	0.35	0.53	0.05	0.17	0.34

t- statistics are in *italic*