



What do investment banks charge to underwrite American Depositary Receipts?

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ABSTRACT

We investigate how investment banks determine the gross spreads paid by American Depositary Receipts (ADRs) from 1980 to 2004. We begin by comparing the gross spreads of ADR IPOs and ADR SEOs to those of matching US IPOs and US SEOs. We document clustering at the 7% level for our ADR IPO sample (44% for the ADR IPO firms without a previous equity listing), whereas our ADR SEO sample exhibits no discernible clustering at any level. We then find that ADR IPO gross spreads can be explained by firm and offer characteristics (similar to our matched sample of US IPOs), and by whether the ADR IPO firm has a previous equity listing. ADR SEO gross spreads can be explained more by offer characteristics (more similar to our matched sample of US SEOs).

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1. Introduction

As part of a broad effort to better understand the underwriting process, numerous studies examine the direct costs (gross spreads) of underwriting initial public offerings (IPOs) and seasoned equity offerings (SEOs) in the US¹ Chen and Ritter (2000), for instance, report that underwriters charge exactly 7% for over 90% of the IPOs raising proceeds between \$20 and \$80 million during the period 1995–1998. They suggest that implicit collusion or strategic pricing among underwriters may explain the clustering pattern. In contrast, Hansen (2001) suggests that a 7% gross spread is an efficient contract.

Research focusing on underwriter gross spreads outside the US has also received attention. For example, How and Yeo (2000) suggest that in the Australian market, underwriters systematically price their underwriting services according to a number of firm-specific variables, Torstila (2001) finds that European IPOs with a US bulge-bracket underwriter or bookbuilding pay relatively higher gross spreads, Torstila (2003) presents that the patterns of clus-

tering in IPO gross spreads arise not only in the US, but also in many other markets with low gross spreads, Butler and Huang (2003) report that the gross spreads paid by Hong Kong IPOs and SEOs generally cluster at 2.5%, and Ljungqvist et al. (2003) indicate that while a trade-off exists between gross spreads and underpricing, in contrast to the findings of Chen and Ritter (2000), non-US issuers raising \$20–\$80 million typically pay a gross spread of 7% when US banks and investors are involved.

The studies above emphasize that different capital markets are associated with different gross spreads. Few studies, however, examine how US investment bankers set gross spreads of foreign issues that list in the US One notable exception is Ejara and Ghosh (2004), who compare the gross spreads of American Depositary Receipts (ADRs) to those of matching US IPOs. Yet Ejara and Ghosh mainly concentrate on what influences the underpricing of ADRs; they do not examine the determinants of ADR gross spreads. Our study seeks to shed light on the extent to which various characteristics influence the gross spreads of ADR IPOs and ADR SEOs set by US investment banks.

Arguably, ADR issuers may represent greater risk to the underwriter, and in turn more work for the underwriter, which may lead to a higher gross spread for ADRs than for US firms. It is also possible that, as James (1992) finds for US IPOs, underwriters may charge lower gross spreads to ADR IPOs if these underwriters are more likely to underwrite subsequent equity offerings to these same ADRs. However, there may be other similarities between

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¹ See Ritter (1987) for a detailed description of underwriting costs in initial public offerings. Altinkilic and Hansen (2000) and Butler et al. (2005) examine the determinants of SEO gross spreads in the US.

US IPOs and our ADR IPOs (US SEOs and our ADR SEOs). In particular, because ADRs without a prior listing history should be associated with greater uncertainty, and thus ADRs without (with) a listing history could behave more similarly to US IPOs (US SEOs), US underwriters are likely to treat firms that have higher firm-specific risk (e.g. ADR IPOs and US IPOs) more similarly than they treat firms that have lower firm-specific risk (e.g. ADR SEOs and US SEOs). This hypothesis receives support from [Harris \(1991\)](#), who concludes that in the presence of volatility (uncertainty), clustering arises as traders seek to simplify the negotiation process. Finally, consistent with the findings of [Yeoman \(2001\)](#), [Mola and Loughran \(2004\)](#), and [Bradley et al. \(2004\)](#), among others, ADRs with greater price uncertainty are more likely to charge similar spreads (cluster), and more likely to have integer offer prices, in order to not reveal information regarding their greater uncertainty.

Using univariate analysis, we begin by determining the gross spread charged by US underwriters for ADR IPOs and ADR SEOs, as compared to the gross spread charged for a sample of US IPOs and US SEOs matched on industry, size, and time of offering. Then, using multivariate regression analysis, we investigate which characteristics determine the gross spreads of our sample firms. We focus on firm- and offer-specific characteristics such as firm risk (e.g. volatility), offer size, underwriter quality, listing exchange, level of country development, and other factors known to affect gross spreads.

In the univariate analysis, we find that the average gross spread for ADR IPOs is 5.06% (6.86% for our matched US IPO firms) and for ADR SEOs is 4.03% (4.76% for our matched US SEO firms). The results on IPOs are consistent with [Ejara and Ghosh \(2004\)](#), who find an average ADR IPO gross spread of 5.16%, with an average matching US IPO gross spread of 6.86%. Further, consistent with [Chen and Ritter \(2000\)](#), we find that 72.4% of our matched US IPO firms are charged a gross spread of 7%. The ADR IPO firms in our sample show some clustering at 7%, with 29% of ADR IPOs that have an issue size of less than \$80 million paying a gross spread of 7%, and 44% of ADR IPOs without a prior listing that have an issue size greater than \$20 million and less than \$80 million paying a gross spread of 7%. The ADR SEOs in our sample, however, show little clustering at any level (e.g. only 1.5% of these firms pay a gross spread of 7%). These results are consistent with both the desire to simplify the negotiation process ([Harris, 1991](#)) of risky firms and the information asymmetry explanation ([Yeoman, 2001](#); [Mola and Loughran, 2004](#); [Bradley et al., 2004](#)). Finally, we also observe that ADR IPOs have significantly higher proceeds than our matched sample of US IPOs (the pattern is similar for our ADR SEOs and our matched US SEOs).

Next, we run several multivariate regressions to determine the extent to which various characteristics impact the gross spreads of our sample firms. Specifically, we run separate regressions for ADR IPOs, US IPOs, ADR SEOs, and US SEOs, and then we run a regression with all IPOs and a regression with all SEOs.

Our ADR IPO multivariate regression analyses reveal that firm- and offer-specific characteristics such as offer size, underwriter reputation, number of managers in the offering, listing exchange, industry type (high tech or not), post-listing return volatility, level of country development, and whether the listing is part of a privatization are significantly related to ADR IPO gross spreads. These analyses also show that ADR IPOs with a prior listing are charged lower gross spreads than ADRs without a prior listing, but a prior listing with an integer offer price is charged a higher gross spread.² Similarly, our US IPO regression analyses uncover that offer size,

number of managers in the offering, listing exchange, (integer) offer price, and whether the US IPO firm has a subsequent equity offering within five years affect gross spreads. In contrast, our ADR SEO sample regression results show that mainly offer characteristics (offer size, underwriter reputation, number of managers in the offering, and listing exchange) impact gross spreads. The results for US SEO firms are similar except that volatility also affects their gross spreads, with greater volatility in stock market returns positively affecting the gross spreads of US SEOs.

As in studies such as these we cannot be certain in concluding the gross spreads are more underwriter or firm imposed because only completed offerings are reported, but we can examine what factors affect the equilibrium gross spreads charged to ADRs.³ Specifically, this paper contributes to the extant literature by examining the determinants of gross spreads for ADR IPOs and ADR SEOs and compares the determinants to a matched sample of US IPOs and US SEOs. Also, the study compares the clustering of gross spreads for US IPOs to that of ADR IPOs and ADR SEOs. Overall, our results indicate that firm and offer characteristics are related to gross spreads for ADR IPOs (similar for our matched US IPOs) and that greater uncertainty leads to higher gross spreads. The gross spreads of our ADR IPO sample exhibits some clustering at 7%. Our ADR SEO gross spreads can be explained more by offer characteristics only (results supported with our US SEO matched sample) and displays no sign of gross spread clustering.

The remainder of the paper proceeds as follows: Section 2 provides a brief background of ADRs. Section 3 summarizes our data and sample ADR characteristics. Section 4 presents the methodology used in this paper, Section 5 reports our regression results, and Section 6 concludes.

2. ADR background

ADRs issued by US depository banks are the instrument by which most non-US companies list on US exchanges. The US depository banks hold the foreign securities in a custodian bank located in the country of origin and issue investors' dividend and other payments in dollars. Although investors bear the currency risk underlying ADR transactions, ADRs represent a more convenient and less costly way for investors to achieve portfolio diversification compared to direct investments in foreign shares.

The first ADR program was created by J.P. Morgan in 1927 in response to high investment demand in the London Stock Exchange (LSE). These original ADRs were "unsponsored," as they did not need the permission of the firm to trade, they could have many registrars, and they could have transfer and paying agents at the same time. Today, most ADRs, and those in our sample, are sponsored. This provides issuers more control over their firms' ADRs because there is only one depository agent for each ADR and the issuers can directly negotiate with the US depository banks.

There are four types of ADRs in the US market.⁴ Level I ADRs are traded over the counter (OTC) or on Pink Sheets and need not meet SEC requirements or comply with US Generally Accepted Accounting Principles (GAAP). Level II ADRs are traded on an exchange (e.g. NYSE, AMEX, or Nasdaq) and require full SEC disclosure and US GAAP compliance. Notably, neither Level I nor Level II ADRs raise new equity in the US market. Level III ADRs are also traded on an exchange and thus also require full SEC disclosure and US GAAP compliance, but Level III issues raise capital in the US market. The final type of ADRs includes Rule 144A ADRs. These are placed privately with Qualified Institutional Buyers (QIB) and are not subject to SEC

² We use Bloomberg and Datastream to identify whether any of our ADR IPOs are listed on an exchange prior to their US offering. A firm listed on any exchange prior to their US offering is considered to have a prior listing. A firm that issues equity simultaneously in other markets is considered not to have a prior listing.

³ The authors wish to thank an anonymous referee for pointing out this issue.

⁴ [Foerster and Karolyi \(1999\)](#) present a detailed table summarizing SEC registration and US reporting requirements.

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