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**GENTLEMANLY CAPITALISM REVISITED:
A CASE STUDY OF THE UNDERPRICING OF INITIAL
PUBLIC OFFERINGS ON THE LONDON STOCK EXCHANGE
1946-86**

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**GENTLEMANLY CAPITALISM REVISITED: A CASE STUDY OF THE
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Abstract: Allegations of British capital market failure are numerous, range from claims of domestic investor bias before 1914 to charges of short-termism against institutional investors towards the end of the last century, and are frequently contentious. This paper revisits this literature by pointing to the post-1945 market for initial public offerings (IPO) as a clear instance of capital market failure. Despite the tender offer delivering substantially lower underpricing than the traditional fixed-price offer method, it was adopted by only 1 in 12 firms going public. This missed opportunity cost issuing firms between £600 million and £1.3 billion in IPO proceeds forgone between 1960 and 1986 at 2005 prices, excluding privatisations, and can be attributed to a lack of competition among issuing houses and brokers before Big Bang.

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The British capital market failure debate from the late nineteenth century onwards is a long-running and contentious one.¹ Allegations include investor bias against domestic industrial securities before 1914,² inadequate financing of small firms (the “Macmillan gap”),³ an inability of the financial system to provide sufficient risk capital⁴ and to restructure interwar staple industries,⁵ and, in the post-1945 era, the shirking of corporate governance responsibilities⁶ and the short-termist behaviour exhibited by institutional investors.⁷ Claims of investor bias⁸ and short-termism have been rebutted,⁹ whilst the Macmillan gap disappeared by the end of the 1950s.¹⁰ Corporate governance case studies are enlightening, but few in number, and may not be representative. In the case of banks, their inability to provide adequate support to their industrial clientele has been subject to revisionist interpretation on two fronts. Firstly, any disadvantage in comparison with the German universal banking model has been overstated¹¹; and secondly, by the interwar period, Britain had decisively committed itself to a diversified and market-orientated financial system with industry increasingly dependent upon the stock exchange rather than the banking sector for its investment, as opposed to working capital, needs.¹² In the case of a rapidly expanding industry such as brewing, the stock market was already providing long-term finance in greater quantities than traditional bank debt before 1914.¹³

Gentlemanly capitalism, as defined by Cain and Hopkins (1980, 1986, 2002), was reflected in the existence of an elite of City financiers, sat at the apex of a dynamic service sector economy centred on the South-East, and close to political power. Whilst not openly hostile to provincial manufacturing, the gentlemanly capitalists concentrated upon opportunities in international trade and finance, initially through the Empire up to WW2, and,

¹ Cassis (1990) and Capie and Collins (1990) are summaries.

² Cairncross (1953), Kennedy (1987).

³ Macmillan Committee (1931).

⁴ Kennedy (1987).

⁵ Best and Humphries (1986).

⁶ Bowden and Maltby (1998) and Bowden (2002).

⁷ Innovation Advisory Board (1990).

⁸ Edelstein (1976) and Goetzmann and Ukhov (2005).

⁹ Marsh (1990).

¹⁰ Radcliffe Committee (1959).

¹¹ Edwards and Ogilvie (1996), Collins (1998) and Fohlin (1999).

¹² Collins (1991); Ross (1996)

¹³ Watson (1996).

thereafter, steadily switched their attentions to more global horizons. This City elite is seen as making a materially positive contribution to Britain's trade in invisibles and its economic performance over the last 150 years. Apart from Cassis (1994), who has documented the considerable "weight" of the world of high finance in social and political Britain before 1914, most authors have been less charitable, claiming a decisive tilting of government economic policy in favour of City interests at the expense of industry, and a reluctance to seek the business of industrial firms with any degree of enthusiasm.¹⁴ Augar (2001) has criticised the gentlemanly, amateurish approach of the British merchant banks and brokers pre-Big Bang, whilst lamenting their subsequent demise.

One manifestation of the power and influence of the gentlemanly capitalists was the *Accepting Houses Committee* (AHC) first established in 1914, and comprised of the merchant banking establishment. These banks ruled the world of City finance from the second half of the nineteenth century until Big Bang in 1986,¹⁵ and their dominance fostered the emergence of established business attitudes and practices.¹⁶ One such practice was the fixed-price offer, the dominant method used by firms conducting an Initial Public Offering (IPO) on the LSE.¹⁷ Occasionally, other methods were adopted. In 1961, a small property developer, Parway Land and Investment, was the first private firm to go public by auctioning its shares on the London Stock Exchange (LSE). This tender offer was a success. All shares were successfully sold and the share price rose a modest 14.3% on the first day of trading considerably less than the rise for previous IPOs over that year to date. The price rise in initial trading over the offer price, called "underpricing", is a measure of how accurately the issuing firm and its advisers are able to anticipate the valuation placed upon it by public investors once trading begins. It is one benchmark of the informational efficiency of the stock

¹⁴ Pollard (1982), p.86-87; Ingham (1984); Newton and Porter (1988); and Hutton (1994).

¹⁵ Big Bang refers to the wholesale deregulation of the LSE, but particularly the liberalisation of fixed brokerage commissions, the opening up of LSE membership to foreign ownership and the ending of the prohibition on share broking and jobbing being conducted by the same firm. Thomas (1986).

¹⁶ Thompson (1997).

¹⁷ I adopt the terminology IPO in preference to "new issue" which denotes either an IPO, or a "further issue" undertaken by a firm already listed. In Britain, most further issues in this period were rights issues where the existing shareholders have a pre-emptive right to subscribe to new issues in proportion to their existing shareholding.

market.¹⁸ In 1967, the first British empirical study of IPO underpricing unequivocally recommended the tender method over the fixed-price offer.¹⁹ Despite such advocacy and the substantially lower underpricing delivered by tenders, this innovation was adopted by only 1 in 12 firms going public up until its disappearance shortly after Big Bang.

Beginning in the interwar years, there emerged a new breed of institutional investor hungry for ordinary share investments.²⁰ Firms responded by issuing ordinary shares rather than preference shares or debentures. This new “equity culture” propelled institutions to majority ownership of the UK stock market by the mid-1970s.²¹ The issuing houses,²² led primarily by the merchant banking members of the AHC, were initially slow to switch their attention from underwriting foreign bonds and did not commit to industrial ordinary share issues until the formation of the *Issuing Houses Association* in 1945. As IPO activity surged during the early 1960s, this new business became an increasingly important and profitable activity alongside merger and acquisition advice. The issuing firms themselves, however, did less well when judged by rising underpricing exacerbated by a failure to adopt the tender method. As the twentieth century progressed, the LSE embraced a number of anti-competitive practices, which led to referral to the *Monopolies and Mergers Commission* (MMC) in 1973 and growing government pressure to open the LSE to competition,²³ culminating in Big Bang. Fixed underwriting fees and a subdued level of entry or exit suggest that the issuing houses were also subject to little or no competitive pressure. As a consequence, the tender offer remained underutilised at a cost to private firms going public in proceeds forgone of between £600 million and £1.3 billion in 2005 prices.

The missed opportunity of the tender offer is an example of capital market failure to be set alongside inefficiencies in the merger and acquisition process²⁴ and is evidence of the difficulties faced by Britain post-1945 in full pursuit of a stock market-oriented approach to

¹⁸ Underpricing has been extensively analysed in the financial economic literature. See Jenkinson and Ljungqvist (2001), ch.3.

¹⁹ Merrett, Howe and Newbould (1967).

²⁰ Scott (2002).

²¹ Briston and Dobbins (1978).

²² Issuing house refers to any bank, or investment trust, specialising in sponsoring and underwriting new issues. Around the time of Big Bang, they became known as investment banks reflecting US influence and the merger with broking and jobbing firms.

²³ Michie (2001).

²⁴ See Morris (1998) for a summary; Owen (1999), ch.14.

corporate finance when confronted with now familiar asymmetric information and agency problems between firms and investors. This missed opportunity is as much about a lack of competition in UK investment banking as it is about information asymmetry problems. Whilst there is no denial of the contribution made by merchant banking to the overall export performance of the financial services sector, nor of an ability at times to develop such new markets as the Eurodollar and Eurobond markets,²⁵ firms going public could have been better served. This conclusion is in keeping with the view expressed by Broadberry and Crafts (2001) regarding the poor innovation performance of British manufacturing industry in the absence of a competitive stimulus.

The next section discusses the development of the IPO underwriting market in Britain and argues that there was a lack of competition prior to Big Bang. Section II describes the features of the tender offer compared to alternative issue methods and its frequency of use. Section III presents the evidence for substantially lower underpricing of IPOs by tender offer and section IV considers reasons why tender offers were not more enthusiastically adopted by the market. Section V briefly comments on events since Big Bang and section VI concludes.

I

Whereas firms had issued preference shares and debentures at least as often as ordinary shares in the three decades before WW1,²⁶ during the interwar years, issues of ordinary shares were on the increase²⁷ and became the preferred vehicle for firms raising finance on the stock market from the 1950s onwards.²⁸ *The Economist* first pointed out in 1929 that issuers were selling their shares at a price below levels at which they began

²⁵ Broadberry (2005).

²⁶ Cottrell (1980), ch.6.

²⁷ Thomas (1978)..

²⁸ Between 1949 and 1953, three-quarters of equity new issues by UK quoted firms were of ordinary shares and one-quarter were of preference shares, Tew and Henderson (1959), p.17, Table 1.12. By 1960, over 90% of equity new issues by industrial and commercial companies by market value were of ordinary shares and by 1975 virtually all issues were of ordinary shares, *Bank of England Quarterly Bulletin* vol.16 no.2 June 1976, "The cost of capital, finance and investment", p.196, Table B, columns (1)-(3).

trading on the market and not maximising issue proceeds.²⁹ The Merrett, Howe and Newbould study of IPOs between 1959 and 1963 was the first of a series of studies up to the present day highlighting the underpricing problem.³⁰ The authors warned that, contrary to popular investment opinion, a heavily oversubscribed IPO accompanied by a sharp share price rise on day one did not constitute a “success”. Figure 1 graphs average underpricing of IPOs on the LSE for each year from 1946 up to Big Bang in 1986 (data sources are discussed in Appendix 1). Over this period, IPO returns averaged 14.5%, a figure which delighted investors, but ought not to have pleased issuing firms. Since Big Bang, average underpricing has risen to 25.3%, or alternatively, remained barely unchanged at 13.7%, depending upon whether one includes or excludes the bubble years of 1999-2000 respectively.³¹ A recent long-run study of underpricing on the LSE from WW1 has concluded that underpricing was relatively modest prior to WW2 and only became a more persistent problem thereafter.³²

In the period of this study 1946-86, a firm going public usually retained an issuing house to sponsor its IPO. Invariably, the shares were also underwritten, or, in other words, the issuing house would contract to purchase at the offer price any shares not taken up by investors. In this way, the firm effectively leased the issuing house's reputation in order to certify its quality to public investors, and, thereby, raised the probability of its shares being successfully sold. In stark contrast, before 1939, underwriting was conducted by an assortment of company promoters, syndicates, company directors, stockbrokers and a new breed of industrial trust, and there were considerable doubts about the capital backing of underwriters in an environment where such information was not made public.³³ The poor survival rate of IPOs following the 1928 boom³⁴ testified to the abundance of underwriters without sufficient capital or interest in building a sound reputation. The most reputable

²⁹ 27 July 1929, p.175-6.

³⁰ Most notably, Davies and Yeomans (1975), Dimson (1979), Buckland and Davies (1990), Lewis (1993), Jenkinson and Trundle (1990) and Ljungqvist (2003).

³¹ This average is the reported annual underpricing for each year weighted by the number of IPOs in that year, whereas the average for 1946-86 weights each IPO equally.

³² Chambers and Dimson (2006).

³³ Finnie (1934) p.137-60; Thomas (1978), p.39; *The Economist*, 5 Jul. 1924, p.13.

³⁴ Harris (1933), Andrews (1937).

underwriters were the merchant banking members of the *Accepting Houses Committee* (AHC). Having been very active in underwriting foreign bond issues before 1914, these banks were reluctant to commit themselves to underwriting industrial IPOs, despite the contraction of foreign issue business in the interwar years.³⁵ Indeed, only 4 out of 593 interwar ordinary share IPOs were underwritten by AHC members.³⁶ In the remainder of this paper, I define a reputable underwriter by membership of the AHC. Total membership remained at seventeen for almost the entire period from the late 1940s until its dissolution in 1987, new members being admitted only in cases of merger involving existing committee members.³⁷

The IPO market underwent profound change in 1945 with the establishment of the *Issuing Houses Association* (IHA), a body intended to represent the interests of issuing houses to the regulatory authorities and sharing offices and staff with the AHC. The AHC members controlled the IHA Executive Committee. From its inception in December 1945 until Big Bang, the IHA dominated the lead underwriting of IPOs with a 54% market share by number of issues and 76% by value, defined as real IPO proceeds (Table 1, and Appendix 1(i) for details on data sources).³⁸ The AHC members alone underwrote 53% of IPOs by value. Typically, the lead underwriter had overall responsibility for underwriting and advising on an IPO by way of a public offer. The underwriting issuing house retained the services of a broker to arrange the sub-underwriting of the offer by institutional investors, and to distribute the shares to investors, including some of those same institutions. Brokers also engaged in underwriting IPOs themselves, concentrating on smaller firms and placings.

In tune with its sister institution, IHA membership was also stable at between 50 and 55 houses. Applicants were required to submit a statement of their financial position, their board of directors and their record in handling new issue business³⁹ and, when judged to be inexperienced or undercapitalised, entry was deferred.⁴⁰ As with the AHC, entry only

³⁵ Roberts (1992), p.268-269; Diaper (1986), p.59; Macmillan Committee (1931), para.386.

³⁶ Chambers and Dimson (2006).

³⁷ Editions of *The Bankers Almanac* from 1946 to 1987.

³⁸ I have treated placings as “underwritten” where the issuing house or broker has agreed at a specified price to take any shares not bought by investors.

³⁹ *Issuing Houses Association Rules*, 20 June 1969, Manuscripts Section, Guildhall Library.

⁴⁰ *Issuing Houses Association*, Executive Committee Minutes, Manuscripts Section, Guildhall Library.

occurred when existing members merged. In no case did members exit for performance reasons and none of the entrants made aggressive inroads into this market. The UK clearing banks, National Westminster, Barclays and Lloyds, joined the IHA in the 1970s, but made little impact.⁴¹ Despite Midland Bank gaining entry through the purchase of an existing merchant bank, Samuel Montagu, in the early 1970s, it was largely passive in managing its new investment. Among foreign banks, only Credit Suisse First Boston and Manufacturers Hanover from the US, neither of which was a major underwriter on Wall Street, three Scandinavian banks and Australia and New Zealand Banking Corporation were granted membership of the IHA. None subsequently claimed a material share of IPO underwriting in London (Table 2).

Market concentration in IPO underwriting (C3 and C5 measures) among issuing houses was relatively modest, other than in the late 1940s, and the identity of the largest underwriters shifted over time. These concentration measures do not include Cazenove, the most active of the brokers sponsoring IPOs, which is included at the bottom of the table for comparison. Notwithstanding modest concentration, underwriting fees on IPOs, and rights issues, were fixed at 2% throughout this period.⁴² Out of this 2%, the issuing house would typically pay 1.25% to the sub-underwriters, 0.25% to the broker for arranging the sub-underwriting and retain 0.5% for itself as an advisory fee. In 1999, the MMC investigated share underwriting, recognizing the possibility of anti-competitive behaviour with a history stretching back to at least the early 1970s.⁴³ In short, competition was lacking in IPO underwriting prior to Big Bang. Furthermore, in 1973, the LSE itself had been referred to the MMC over restrictions upon advertising, and remained under threat of referral to the *Restrictive Practices Court* over fixed brokerage commissions, until it agreed in 1983 to deregulate a few years later.⁴⁴

⁴¹ Prior to the government's adoption of its new policy, *Competition and Credit Control*, in 1971, the clearing banks had colluded over lending rates. However, the clearing banks were not large underwriters of IPOs and this deregulation gave no impetus to competition in the IPO market.

⁴² Merrett, Howe and Newbould (1967); "New issue pricing is more of an art than a science", *The Times* 18 September 1984, p.22; and Monopolies and Mergers Commission (1999), para. 2.10-2.15.

⁴³ Monopolies and Mergers Commission (1999), para. 2.103(a)

⁴⁴ Thomas (1986), ch.3.

Issuing firms are concerned with maximizing IPO proceeds subject to ensuring liquidity in post-IPO share trading by achieving a reasonable spread of ownership.⁴⁵ In addition, it is likely that managers were increasingly motivated to disperse shareholdings in order to retain control of their business as the threat of hostile takeover materialised in the wake of the 1948 Companies Act,⁴⁶ a point to which I return below when discussing my results. There was also a desire by issuers to avoid the undersubscription of their IPO and a consequent poor start to life as a public company.⁴⁷

From at least WW1 until Big Bang in 1986, an IPO on the LSE was usually conducted by way of the fixed offer price method. The issuing firm and its sponsors set the offer price and made no subsequent adjustment in order to balance demand and supply following discussions with investors. Fixed-price offers were of two main types: public issues, and offers for sale.⁴⁸ Public issues involved an offer of shares in the issuing company by prospectus directly to investors at a fixed-price, usually by an issuing house or broker. Offers for sale are very similar with the only difference being that an issuing house, or broker, first buys the shares from the company, or its selling shareholders, and then offers them to the public. A third issue method was the placing. This also involved the issuing house, or broker, first buying the shares from the issuing firm, or its shareholders, at an agreed, and then fixing the price at which they distributed them to a relatively small number of their investment clients. Popular with small firms, this method differed from a prospectus issue in that the timetable was shorter, and direct IPO costs, including underwriting, accounting, and legal fees, were lower.⁴⁹ Despite advantages of speed and cost, placings had a tendency to result in higher indirect costs, namely, underpricing. In the rest of this paper, given their

⁴⁵ Although, LSE listing requirements did not stipulate any minimum number of shareholders, shares needed to be distributed sufficiently widely to establish a market in the shares and thereby to obtain the LSE's granting of a quotation.

⁴⁶ Hannah (1983), p.149-50. One quarter of quoted firms on the LSE were acquired in the 15 years following the Act.

⁴⁷ Buckland, Herbert and Yeomans (1981).

⁴⁸ Thomas (1978), p.38-43, and Jenkinson and Trundle (1990) give summaries of the various issue methods.

⁴⁹ Jenkinson and Trundle (1990) compare direct IPO costs as well as indirect costs, or underpricing, by IPO method.

similar features and susceptibility to excessive underpricing, I contrast fixed-price offers and placings, on the one hand, with tenders on the other.

A tender offer is a form of auction. There is an extensive literature on auction theory relating to IPOs.⁵⁰ The vast majority of tender offers in Britain were simultaneous uniform price auctions. Each investor submitted a single, sealed bid for a block of shares at a specified price at or above a minimum tender price. Auctions of financial securities are generally characterised by large numbers of bidders, a feature which typically lowers the risk of investors colluding to submit low bids and buying securities on the cheap. The minimum tender price also acted as a reservation price, further deterring investor collusion. Once all bids were submitted, the issuing firm under advice from its issuing house allocated shares at a single strike price. If the IPO was oversubscribed, the strike price was set somewhere above the minimum price, but below the market-clearing price, and shares were allocated *pro rata* to investors; if undersubscribed, the offer price was fixed at the minimum tender price, and the underwriting issuing house had to purchase at this minimum price those shares not tendered for.

Having previously restricted the use of tenders to the stock issues made by water utility companies, the Stock Exchange Council first rejected a request for a relaxation of this restriction at the end of 1959 before finally approving a tender offer of ordinary shares in June 1961.⁵¹ Approval was forthcoming because of a desire to avoid further instances of heavily-underpriced IPOs, and because of the difficulty of valuing Parway Land and Investments' property portfolio given that much of it was still under development and there was a lack of quoted peers.⁵²

An example of a tender offer is the Renwick Wilton & Dobson IPO in November 1963. 405,000 existing shares were offered out of total shares outstanding of 1,735,000 at a minimum tender price of 13s.. The offer was fifteen times oversubscribed at prices between 13s. and 30s. (Appendix 2(i)). The market-clearing strike price was 17s. 9d. in the Renwick

⁵⁰ Biais and Faugeron-Crouzet (2002); Biais Bosaerts and Rochet (2002); Derrien and Womack (2003) deal specifically with IPO auctions. See Klemperer (2002) for a more general discussion of auction design.

⁵¹ "Issues by Tender: A Trial Run", *The Economist* 3 June 1961. p.1030.

⁵² "First Equity Issue by Tender", *The Times*, 10 June 1961, p.15.

case. At this price shares would have been allocated to a relatively small number of investors, between 220 and 230. Given the desire to establish a liquid market post-IPO, successful applicants received only a *pro rata* allocation of the shares they tendered for, as set out in Appendix 2(ii), rather than being allotted in full. Hence, after scaling down, 1194 investors were allocated shares at a strike price of 15s. 9d.. The tender was successful both in achieving an offer price 2s. 9d. above the minimum price of 13s. and in ensuring a wider spread of ownership.

The overwhelming advantage of the tender was that it gave issuers the option to sell shares at closer to fair value, as defined by initial trading in the shares on the stock market. It allowed a firm to estimate the demand curve for its shares at the time of the IPO, something that was not feasible in the case of a fixed-price offer, where any issuing firm was reliant upon the expertise of its advisers in setting the offer price. The Renwick Wilton & Dobson IPO demand curve for shares above the strike price is graphed in Figure 2, and its downward sloping feature is typical of tender offers in this period.⁵³ In theory, Renwick Wilton & Dobson had the option of price discriminating by accepting each application at the price tendered, starting with the 200 shares tendered at 30s., rather than setting a uniform price. However, in practice all but two firms undertaking tenders opted for a uniform strike price. Being concerned for the interests of the small investor, the LSE feared that retail investors might submit excessively high bids in their efforts to secure a share allocation, and would suffer large capital losses in initial trading, should price discrimination be permitted.

Between 1960 and 1986 tender offers represented only 8% of all IPOs (Table 3). Having become popular in 1968, they then disappeared, and there was only one further such issue in the 1970s. Following renewed dissatisfaction with the underpricing of fixed-price offers,⁵⁴ tenders underwent a modest resurgence in 1983 only for interest to ebb away once more. The very last private firm IPO by tender offer was The Virgin Group in November 1986, shortly after Big Bang.⁵⁵ The stimulus to competition in the securities business, including IPO underwriting, imparted by Big Bang led to innovation in IPO methods, and the

⁵³ Merrett, Howe and Newbould (1967) traced the similar demand curves for 12 other tenders in 1963.

⁵⁴ The IPO by Superdrug was underpriced by 54%, *Investors Chronicle*, 21 October 1983, p14.

⁵⁵ The last tender was the privatisation of British Aiports Authority in July 1987.

demise of the fixed-price offer in favour of book-building, a method designed to estimate the fair value of an issuing firm more accurately by incentivising informed investors to reveal their private information before fixing the offer price.

III

There were 1455 IPOs between 1960, when the tender offer for an IPO was first proposed to the LSE, and the end of 1986, the date of the last such offer by a private firm. The data sources on issue terms, issue methods, and firm characteristics, and variable definitions are described in Appendix 1, along with summary descriptive statistics and a correlation matrix. Tenders delivered lower underpricing compared to fixed-price offers both across the whole period as well as in each decade (Table 4). Equally-weighted mean underpricing of tenders was 6.45% compared to 10.44% for fixed-price offers and 20.48% for placings between 1960 and 1986.⁵⁶ Tenders also exhibited lower median underpricing than either of the traditional issue methods (4.28% versus 6.67% and 12.45%). Furthermore, the proportion of IPOs with positive first-day returns ($RET > 0\%$) was higher than that for fixed-price offers (84% versus 74%), suggesting that tenders were not so aggressively priced as to invite price falls in initial trading any more frequently than fixed-price offers. Placings, on the other hand, were so attractively priced as to almost guarantee a rise in share price since all but 5% generated a first-day return.

One of the reasons given for the first IPO by tender, Parway Land, was that its shares were risky, lacked comparable quoted companies, and were therefore difficult to value. According to the empirical finance literature, the riskier is the firm going public, the greater its susceptibility to underpricing.⁵⁷ We should therefore expect that the riskier a firm is, the more likely its choice of the tender method, other things being equal. Firm risk is proxied by its market capitalisation (MCAP), age (AGE), the number of years of historic profits disclosed (TRACK), dividend yield (DIVYLD), and whether or not it is engaged in research and

⁵⁶ In Table 4, the differences between the means of tenders and fixed-price offers and of tenders and placings over the whole period 1960-86 are statistically significant at the 0.1% level.

⁵⁷ Beatty and Ritter (1986); Jenkinson and Ljungqvist (2001), chapter 3.

development (R&D). Incentives should also influence the choice of issue method.⁵⁸ Management of IPOs selling a substantial portion of the firm's equity (PROPSOLD), and selling their own shares in the IPO (VENDOR) are highly motivated to maximise IPO proceeds. Definitions of all IPO characteristics are described in Appendix 1(ii).

Table 5 compares the characteristics of those firms choosing tender offers over fixed-price offers and placings, and also tests for the statistical significance of the differences in mean values of those characteristics. Since there was only a single tender at the end of the 1970s, I confine my comments to the most striking features of the periods 1960-69 and 1980-86. As predicted, riskier firms, namely, those with a low dividend yield, and firms with insiders selling existing shares (VENDOR) were more likely to select a tender offer in both periods.⁵⁹ Risky firms in terms of those undertaking R&D activity were more likely to opt for a tender than a fixed-price offer or placing, but this difference was not statistically significant in 1980-86. Contrary to expectations, larger firms (MCAP) chose tenders, particularly when compared to placings. Since tenders were more complicated, firm size may be picking up the importance of the financial sophistication of the issuing firm in the choice of IPO method. For the same reason, these tenders by large firms were more likely to be underwritten by AHC members compared to placings, mainly chosen by small firms.

Given the differences in characteristics of firms choosing tenders compared to fixed-price offers and placings, I estimate the impact of the tender method on underpricing by controlling for these characteristics as well as underwriting arrangements, industry risk, and equity market conditions, for the entire sample of IPOs between 1960 and 1986. I employ a simple linear underpricing model of the form:

$$\begin{aligned} \text{RET} = & \beta_1 * \text{TENDER} + \beta_2 * \text{PLACING} + \beta_3 * \text{LNMCAP} + \beta_4 * \text{LN}(1 + \text{AGE}) + \beta_5 * \text{DIVYLD} + \beta_6 * \text{TRACK} + \\ & \beta_7 * \text{PROPSOLD} + \beta_8 * \text{VENDOR} + \beta_9 * \text{R\&D} + \beta_{10} * \text{AHC} + \beta_{11} * \text{MKTRET} + \beta_{12} * \text{SEDOL} + \beta_{13} * \text{YEAR} + \varepsilon \end{aligned}$$

⁵⁸ Jenkinson and Ljungqvist (2001).

⁵⁹ There was more existing shareholder selling for tenders compared to placings in 1960-69, but the difference was not statistically significant.

where RET is the percentage change in the closing price on the first day over the offer (strike) price adjusted for the change in the equity market index. TENDER is a dummy variable taking the value 1, if the IPO is conducted by tender offer, and 0 otherwise. PLACING is a dummy variable taking the value 1, if the IPO is conducted by the placing method, and 0 otherwise. A full set of YEAR dummy variables is included, and the constant is suppressed. YEAR takes a value of 1 for the year in which the IPO first trades and 0 otherwise. All other right hand side variables are as defined in Appendix 1(ii).

The results from an OLS estimation of the above model are summarized in Table 6. The coefficient on the tender dummy variable in regression 1 indicates that this method lowered underpricing by 9.8% across the whole period compared to fixed-price offers and by an additional 4.5% compared to placings (regression 1, Table 6). The underpricing advantage of tenders was sustained through the sub-periods 1960-69 and 1980-86, when tenders were used (regressions 2 and 3). The overall explanatory power as indicated by the adjusted R-squared statistic appears low, but this is not unusual for regressions of this type.⁶⁰

The cost of not making greater use of tenders was substantial. Every additional 1% in underpricing of fixed-price offers and placings cost issuing firms £128 million in forgone proceeds in 2005 prices. Applying a 9.8% underpricing advantage for fixed-price offers and one of 14.3% for placings to real gross proceeds of £10,892 million for fixed-price offers and £1,948 million for placings (Table 4, last column) generates an upper bound estimate of the “money left on the table” from not fully adopting the tender method between 1960 and 1986 of £1,346 million. Out of this total, £1,067 billion is attributable to fixed-price offers, and £279 million to placings. A 9.8% underpricing reduction from the wholesale adoption of tenders would leave fixed price offers underpriced by less than 1% on average. On the more conservative assumption that fixed-price offers were underpriced in line with tenders at 6.45%, and that, as before, placings were underpriced a further 4.5%, a lower bound

⁶⁰ See for example Loughran and Ritter (2004), Table V and VI, panel B, for all periods from 1980 excluding the dotcom bubble years 1999-2000.

estimate of total “money left on the table” would be £600 million in 2005 prices.⁶¹ In all likelihood and even ignoring privatisations, the underpricing problem was more costly for British industry in view of the greater volume of IPOs in this period compared to its major European competitors.⁶²

IV

Given its success in lowering underpricing, why then was the tender not employed in more than 8% of IPOs after 1960?

Contemporary comment alleged that tenders deterred “stags”⁶³ from participating in IPOs, and that they left IPO pricing to uninformed investors rather than an experienced issuing house.⁶⁴ However, in spite of the reduced presence of stags, there were only six instances of undersubscription among the 118 tenders, a lower proportion than that experienced by public offers.⁶⁵ As for the alleged shortcomings of IPO pricing being left to uninformed investors, its underlying premise was that the traditional fixed offer price method had the merit of the issuing house and the broker utilising their expertise and market intelligence to set the offer price reasonably close to fair value. Yet, the underpricing evidence is to the contrary. A second, more legitimate contemporary criticism of tenders was the lack of transparency in the basis of allotment in cases of oversubscription, and the associated tendency to discriminate against large applications from institutions.⁶⁶ However, the allocation basis of fixed-price offers was no more transparent or less discriminatory.

A common defence of fixed-price offer underpricing was that the initial return left a “sweet taste” in new investors’ mouths, and, accordingly, would induce them to look

⁶¹ These estimates exclude privatisations. The Conservative government of the day subordinated any desire to maximise proceeds to the pursuit of wider share ownership among the general public by offering an attractive level of underpricing, Jenkinson and Mayer (1994).

⁶² The average number of IPOs per annum was only 16 in France (1971-86), 13 in Italy (1985-91) 10 in Sweden (1970-91), 8 in each of Germany (1970-93) and the Netherlands (1982-91) and 7 in Switzerland (1983-89), Jenkinson and Ljungqvist (2001). This compares with an LSE average of 56 (1960-86).

⁶³ Defined as investors in pursuit of very short-term capital gains.

⁶⁴ Briston (1970), p.91; and *The Times* 7 October 1963, p.16, “Offers by Tender May Become Standard Practice”.

⁶⁵ 36 out of 297 offers for sale 1965-75 were undersubscribed, Buckland, Herbert and Yeomans (1981).

⁶⁶ *The Economist*, 14 December 1963, p.1203-04, “Experiment Justified”.

favourably on the company following the IPO. If this were true, one would expect the issuing firm to exploit this feel good factor by offering additional shares to investors not too long after the IPO. However, Jenkinson (1990) found that in the second half of the 1980s firms going public were actually less likely to make further issues in the five years after the IPO than were existing quoted (seasoned) firms in the same period. In fact, those IPOs making further issues were less underpriced than those that did not. Additionally, if the sweet taste hypothesis were true, one would expect firms choosing the tender offer in expectation of lower underpricing to be less likely to make further issues than those opting for the fixed-price offer. Again, the evidence is to the contrary. I find that of the 49 tenders in the period 1980-86, 18 made further issues in the immediate five years after going public; in comparison only 18 of the 197 fixed-price offers conducted between 1985 and 1988 in the Jenkinson sample did so.

One potential advantage of the fixed-price offer, not commented upon at the time, was the greater flexibility allowed managers in dispersing share ownership after going public. Brennan and Franks (1997) studied a small sample of 69 UK fixed-price offers in the late 1980s, and concluded that underpricing was positively related with post-IPO ownership dispersion. However, there is no reason, in principle, why fixed-price offers should provide greater flexibility than tender offers in this regard. In the earlier example of the Renwick Wilton and Dobson IPO, when balancing its desire to maximise proceeds against the spread of ownership, the management had a choice as to exactly where on the IPO demand curve between the minimum price and market-clearing price to strike its offer price. Those managements particularly concerned about control set a lower strike price, other things being equal. It is ultimately an empirical question as to whether firms going public by tender had less dispersed ownership structures, and were therefore more vulnerable to takeover.

A more likely explanation for the virtues of the tender being overlooked is the inertia of the underwriting community.⁶⁷ The majority of issuing houses experimented with tenders without ever wholeheartedly embracing the concept. In all, 32 IHA members underwrote 88 tenders, and the 30 remaining tenders were underwritten by 19 separate broking firms. The

⁶⁷ "Equity issue by tender – efficient but seldom used", *The Times*, 14 August 1967, p.18.

lack of competition among issuing houses before Big Bang manifested itself not only in fixed underwriting fees, as previously argued, but also in the absence of any apparent tendency of underwriting market share to vary inversely with the degree of underpricing, as one might expect.⁶⁸ Controlling for IPO risk characteristics, I estimated the model of underpricing outlined in the previous section by OLS, including a dummy variable for each of the ten issuing houses with the largest market share in underwriting fixed-price offers over the period 1960-86 (results not shown). None of these dummy variable coefficients were statistically significant and negative, the implication being that the largest issuing houses did not build their market position on a record of lower underpricing. Consistent with this evidence, the issuing houses equally felt little need to compete for IPO business by recommending the tender method more aggressively to their clients.

How well were the interests of an issuing house in handling IPOs aligned with those of an issuing firm aiming to minimise underpricing? Direct fees received by the issuing house from the firm increased with IPO proceeds, and, therefore, decreased with the extent of underpricing.⁶⁹ Provided firms were happy with their IPO experience, a decision in part based on the achieved level of underpricing, the issuing house faced the prospect of additional fee business from its latest corporate client. On the other hand, the issuing house's effort in marketing the IPO and its lead underwriting risk decreased with underpricing. In theory, firms contemplating an IPO could shop around for an issuing house, and, thereby, punish anyone with a reputation in the market for excessive underpricing. In practice, significant information asymmetry between firms and banks made this difficult, and, hence, there is little evidence of competition for underwriting business based on the underpricing record of any given issuing house.

In mitigation of the issuing houses, institutional investors were equally happy to maintain this *status quo*. As already noted, the sub-underwriters of IPOs, and rights issues, were the very same investment institutions who applied for shares in the IPO, and who,

⁶⁸ Buckland, Herbert and Yeomans (1981) found no tendency of market share to vary inversely with underpricing between 1965 and 1975.

⁶⁹ As well as the 0.5% advisory fee, the lead underwriter would retain a portion of the sub-underwriting.

therefore, had a dual interest in seeing the shares underpriced. Not only would they be allocated shares at a favourable price, they would also earn an attractive sub-underwriting fee. Marsh (1979) concluded that the underwriting fees earned on UK rights issues between 1959 and 1975 were excessive relative to the risks involved.⁷⁰ Based on his estimate of a mean excess return of 0.67% and total rights issue proceeds of £41.2 billion in 2005 prices for 1960-75, excess underwriting profits were approximately £275 million.⁷¹ Making use of the upper and lower bound assumptions of the underpricing benefits from adopting tenders in the previous section, estimated proceeds forgone for IPOs over this same period 1960-75 range between £676 million and £294 million. “Money left on the table” from not adopting tenders was therefore at least as great as the slack in the underwriting of rights issues.

Following Marsh (1979), it is possible that this slack represented side-payments arranged by brokers in return for the brokerage commissions arising from the day-to-day share dealing of institutions keen to remain on sub-underwriting lists. In contrast, issuing houses did not enjoy any such *quid pro quo* in a pre-Big Bang era, when they could not own brokers, and, as a result, could not transact directly with institutional investors. Although they would have an interest in maintaining the general support of these institutions for the smooth running of the IPO market, it is difficult to escape the conclusion that this support was bought at too high a cost for issuing firms.

The growing influence of institutional investors undoubtedly distinguished the post-1945 vintage of gentlemanly capitalism from what had gone before. In the absence of competition in IPO underwriting, there was insufficient impetus for issuing houses to nudge the balance of power in pricing IPOs back towards issuers and away from institutions and, as a result, a good idea was underexploited. However, a few firms did recognise a good idea when they saw one. Numbered among them were such sophisticated financial service firms as Morgan Grenfell, the leading merchant bank, Henderson Administration, the blue chip investment management firm, and Reuters, the financial information provider.

⁷⁰ A subsequent report for the Office of Fair Trading reached a similar conclusion for 1986-93, Marsh (1994).

⁷¹ Rights issue proceeds for 1960-75 were £7.8 billion at 1975 prices, Marsh (1977).

V

Big Bang prompted wholesale change in IPO methods. The years following witnessed a changing of the guard in IPO underwriting as entry by US investment banks and exit by domestic firms proceeded apace.⁷² This in turn led to innovation in issue methods as these same banks imported the book-building method into London displacing fixed-price offers.⁷³ In theory, book-building improved upon the fixed-price offer by allowing investment banks to reward those institutional investors possessing private, price-sensitive information about the IPO with larger allocations of shares, and, thereby, to adjust the final offer price to IPO demand.⁷⁴ Book-building differed crucially from the tender offer in placing the investment bank at the centre of the IPO process. The complete dominance of book-building over the tender offer in London most likely reflects the growing influence of the major investment banks and the preference of the largest institutional investors for the larger share allocations under book-building. This pattern has also been repeated elsewhere.⁷⁵ Even in France, where the tender method was as popular as book-building in the 1990s, it has subsequently fallen into disuse, notwithstanding empirical evidence in its favour.⁷⁶

Has underpricing declined following Big Bang and the “death of gentlemanly capitalism”? Any answer is complicated both by the surge in underpricing on the LSE during the dotcom bubble in 1999-2000, and the greater complexity of both issuer and investment bank objective functions in the post-Big Bang deregulated world and under book-building. Ljungqvist, Jenkinson and Wilhelm (2003) concluded that underpricing of UK IPOs along with other non-US IPOs has been mitigated by the book-building approach. Notwithstanding this evidence, there remains a vigorous debate as to the relative merits of book-building and the tender offer.⁷⁷

⁷² Monopolies and Mergers Commission (1999), para. 4.32; Augar (2001), Table 14, p.310.

⁷³ Ljungqvist (2003), p24 and footnote 25; Monopolies and Mergers Commission (1999).

⁷⁴ Beneviste and Busaba (1997).

⁷⁵ Sherman (2005).

⁷⁶ DeGeorge, Derrien and Womack (2005).

⁷⁷ Biais and Faugeron-Crouzet (2002); Ritter (2003) and Sherman (2005).

By the 1960s, underpricing was recognised as a problem for issuing firms in Britain. Whilst some element of underpricing was necessary to avoid undersubscription and the adverse publicity associated with shares registering a loss on their debut, the margin of underpricing endemic to fixed-price offers and placings was just too great. Having successfully experimented with the tender offer as a solution to this problem and despite its delivering almost 10% lower underpricing than the fixed-price offer, the leading issuing houses failed to exploit their innovation in more than a minority of cases. Competition in IPO underwriting between issuing houses was distinctly lacking and they, along with the broking community and their institutional investor clients, were content with the traditional fixed-offer method of issue. As a consequence, over the quarter of a century to 1986, the total proceeds forgone by firms going public was substantial, and at least as great as the estimated inefficiency of rights issue underwriting. IPO methods only underwent wholesale reform when gentlemanly capitalism was “finally undone by the massive inflow of foreign capital after Big Bang”.⁷⁸

⁷⁸ Cain and Hopkins (2002), p.642.

Table 1: IPO underwriting market shares 1946-86

AHC indicates membership of the *Accepting House Committee*. IHA denotes all members of the *Issuing Houses Association* IHA, including members of the AHC. OTHER denotes other issuing houses, not members of IHA. NONE signifies IPOs not underwritten by a third party. Market shares are calculated by number of IPOs (#IPOs) and by real IPO proceeds (Value) underwritten. The market shares of IHA, BROKERS, OTHER and NONE total 100%.

	AHC		IHA		BROKERS		OTHER		NONE	
	#IPOs	Value	#IPOs	Value	#IPOs	Value	#IPOs	Value	#IPOs	Value
'46-49	6%	9%	66%	68%	21%	22%	9%	8%	5%	2%
'50-59	9%	64%	49%	82%	32%	11%	7%	2%	12%	6%
'60-69	24%	42%	56%	71%	33%	21%	9%	8%	2%	1%
'70-79	33%	52%	70%	83%	23%	12%	5%	4%	2%	0%
'80-86	32%	66%	43%	74%	42%	21%	4%	2%	11%	3%
'60-86	23%	53%	54%	76%	32%	18%	7%	4%	6%	2%

Table 2: IPO underwriting market shares 1946-86

Only the five issuing houses with the largest market share in each period are listed below. Market share is defined by the number of IPOs underwritten. Cazenove, a stockbroker, is included at the bottom of the table for comparison since they had by far the largest share among such firms. C3 and C5 are 3 firm and 5 firm measures of market share respectively.

Period		1946-49	1950-59	1960-69	1970-79	1980-86
	No of IPOs	256	350	617	271	546
	C3	23.8%	10.9%	9.7%	15.5%	13.0%
	C5	30.1%	16.3%	15.1%	22.9%	20.1%
Issuing Houses						
Whitehead Industrial Trust		15.2%	3.4%			
Charterhouse		5.5%	4.0%	3.1%		
Investment Registry		3.1%	3.1%	2.6%		
S G Warburg					3.3%	
Singer & Friedlander				2.9%	6.3%	
London & Yorkshire Trust		3.1%	3.4%			
Hambros Bank					5.2%	4.0%
Kleinwort Benson						4.4%
Philip Hill Higginson Erlangers/Hill Samuel				3.9%	4.1%	4.4%
Standard Industrial Trust		3.1%	2.3%			
Morgan Grenfell						2.9%
Samuel Montagu					3.3%	2.9%
Minster Trust				2.8%		
Gresham Trust				2.9%		
County Bank/County NatWest					3.3%	3.1%
Barclays Merchant Bank/BZW						4.2%
I.C.F.C.					4.1%	
Brokers						
Cazenove		3.2%	6.8%	5.6%	1.2%	1.2%

Note: "Charterhouse" denotes Charterhouse Finance Corporation, Charterhouse Japhet and Charterhouse Bank.

Table 3: IPO Volume by issue methods 1960-86

	Fixed-price Offers	Placings	Tenders	Total IPOs	Tenders % total
1960	35	58	0	93	0%
1961	31	28	1	60	2%
1962	36	32	0	68	0%
1963	34	15	14	63	22%
1964	54	11	12	77	16%
1965	28	29	1	58	2%
1966	22	8	1	31	3%
1967	17	9	4	30	13%
1968	37	13	31	81	38%
1969	43	9	4	56	7%
1960-69	337	212	68	617	11%
1970	43	8	0	51	0%
1971	45	15	0	60	0%
1972	79	7	0	86	0%
1973	30	11	0	41	0%
1974	0	1	0	1	0%
1975	1	1	0	2	0%
1976	5	0	0	5	0%
1977	3	3	0	6	0%
1978	8	2	0	10	0%
1979	5	3	1	9	11%
1970-79	219	53	1	271	0%
1980	4	8	1	13	8%
1981	13	35	2	50	4%
1982	10	41	2	54	4%
1983	20	52	24	97	25%
1984	25	71	6	102	6%
1985	39	79	8	126	6%
1986	48	73	6	127	5%
1980-86	159	359	49	567	8%
1960-86	715	622	118	1455	8%

Table 4: Comparison of First-day returns by issue method 1960-86

First-day returns are adjusted for market movement. Tender returns are estimated based on the strike price. Means are equally-weighted. T-statistics test the null hypothesis that mean first-day return is equal to zero. RET>0% is the proportion of IPOs with positive first-day returns. Gross Proceeds are calculated in 2005 prices. The last two rows give the probability of the differences in mean returns between tenders and fixed-price offers (FPO) and tenders and placings respectively. *** asterisks indicates a 1% significance level.

	N	MEAN	MEDIAN	STDEV	T-STAT	RET>0%	GROSS PROCEEDS (£M)
TENDERS							
1960-86	118	6.45%	4.28%	8.95%	7.86	84%	2,346
1960-69	68	5.80%	4.01%	8.90%	5.30	82%	755
1970-79	1	0.71%	0.71%	NA		100%	5
1980-86	49	7.45%	6.11%	9.08%	5.88	86%	1,586
FIXED-PRICE OFFERS							
1960-86	715	10.44%	6.67%	20.52%	13.68	74%	10,892
1960-69	337	11.45%	6.76%	18.93%	11.23	76%	2,957
1970-79	219	7.85%	5.09%	15.62%	7.45	70%	3,375
1980-86	159	11.85%	7.79%	28.13%	5.30	77%	4,560
PLACINGS							
1960-86	622	20.48%	12.45%	25.79%	19.75	95%	1,948
1960-69	212	18.41%	12.67%	20.63%	12.81	94%	594
1970-79	51	11.75%	8.27%	15.67%	5.32	84%	142
1980-86	359	22.95%	12.94%	29.14%	14.96	98%	1,212
DIFF. OF MEANS							
TENDERS v. FPO's '60-86		0.000***					
TENDERS v. PLACINGS '80-86		0.000***					

Table 5: Comparison of IPO characteristics by issue method 1960-86

Characteristics are equal weighted means of post-IPO market capitalisation at the offer price at 2005 prices (MCAP), firm age (AGE), no. of years historic profits disclosed in IPO prospectus (TRACK), forecast dividend yield at the offer price (DIVYLD), the total number of shares sold in the IPO as a proportion of the total post-IPO shares outstanding (PROPSOLD), the number of existing shares sold in the IPO as a proportion of post-IPO shares outstanding (VENDOR), the proportion of IPOs which undertake R&D activity (R&D) and the proportion of IPOs underwritten by a member of the Accepting Houses Committee (AHC). The bottom four rows give the probability of the mean characteristic values for fixed-price offers and tenders being different. *, **, and *** asterisks indicate significance levels of 10%, 5% and 1% respectively.

	N	MCAP (£M)	AGE	TRACK	DIVYLD	PROP SOLD	VENDOR	R&D	AHC
TENDERS	118								
1960-69	68	33.0	41.6	8.9	4.7%	35%	31%	9%	28%
1970-79	1	18.7	9.0	5.0	7.0%	25%	19%	0%	100%
1980-86	49	143.0	26.8	5.0	2.5%	28%	18%	41%	69%
FIXED-PRICE OFFERS	715								
1960-69	337	31.9	39.1	8.9	5.5%	33%	25%	4%	28%
1970-79	219	57.3	43.4	8.3	5.4%	34%	23%	4%	37%
1980-86	159	97.8	31.7	4.7	3.3%	33%	16%	25%	56%
PLACINGS	622								
1960-69	212	9.9	39.4	9.4	6.5%	31%	28%	7%	16%
1970-79	51	11.7	36.9	7.2	6.4%	28%	20%	8%	13%
1980-86	359	13.9	25.4	4.8	3.9%	27%	13%	21%	16%
DIFF. OF MEANS (p-value)									
TDRS v. FPO's '60-69		0.901	0.374	0.766	0.000***	0.374	0.016**	0.209	0.815
TDRS v. FPO's '80-86		0.334	0.174	0.934	0.030**	0.175	0.032**	0.004***	0.894
TDRS v. PLACINGS '60-69		0.001***	0.021**	0.093*	0.000***	0.021**	0.149	0.674	0.013**
TDRS v. PLACINGS '80-86		0.004***	0.331	0.037**	0.000***	0.331	0.003***	0.005***	0.000***

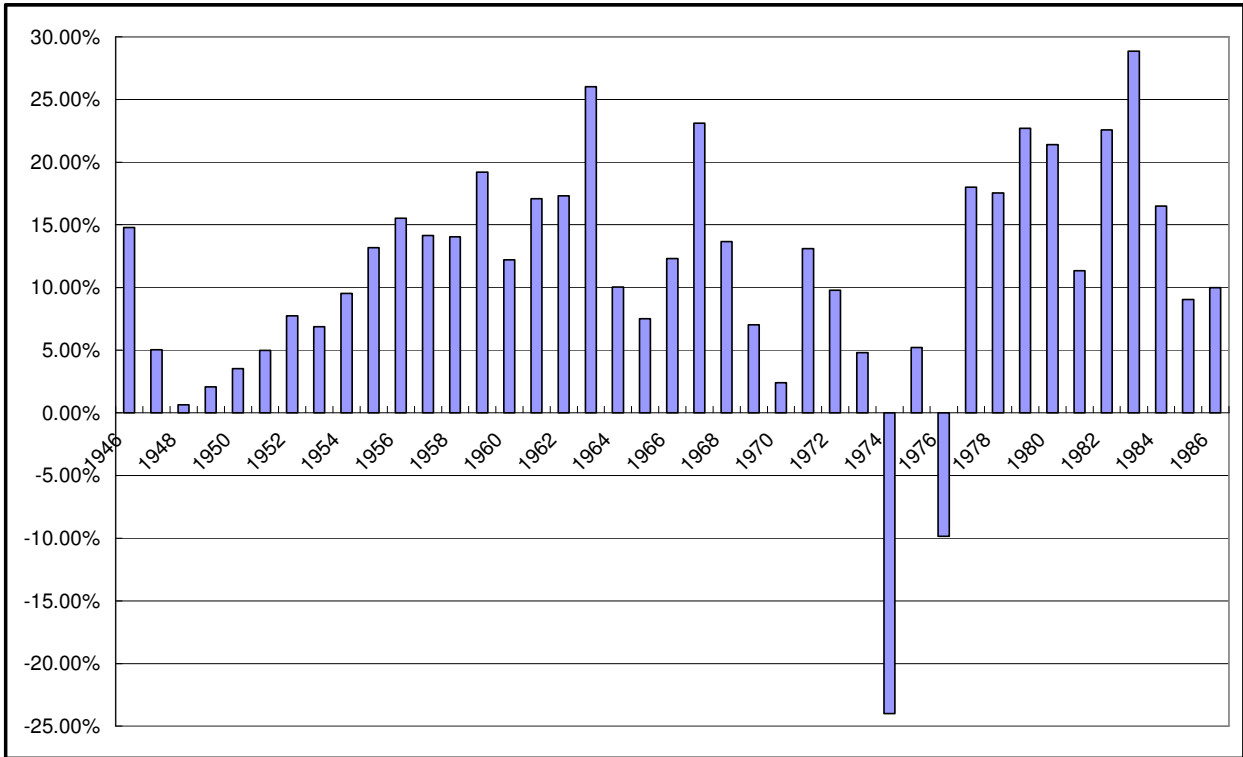
Table 6: OLS regressions of First-day returns 1960-86

The dependent variable is first-day return adjusted for market movement (%). Estimation method is OLS. TENDER is a dummy variable taking the value 1 if the IPO is by tender offer, and 0 otherwise. PLACING is a similarly defined dummy variable. All regressions include a lagged 30 day market return. Other explanatory variables are as defined in Appendix 1(ii). Standard errors are shown in brackets and are adjusted for heteroscedasticity using White's (1980) heteroscedasticity-consistent covariance matrix. *, **, and *** asterisks indicate significance levels of 10%, 5% and 1% respectively.

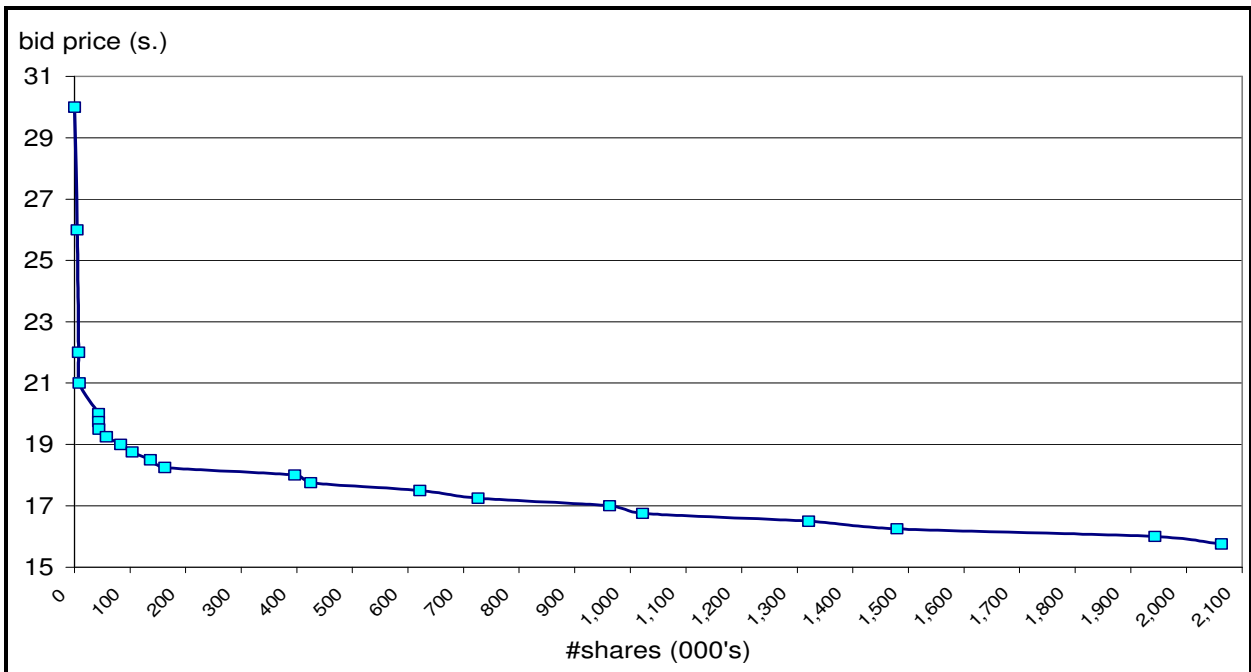
	1	2	3
Period	1960-86	1960-69	1980-86
TENDER	-0.098*** (0.020)	-0.099*** (0.020)	-0.086** (0.036)
PLACING	0.045*** (0.017)	0.054** (0.022)	0.017 (0.036)
LN(MCAP)	-0.025*** (0.009)	-0.021* (0.012)	-0.051*** (0.019)
LN(1+AGE)	-0.018** (0.007)	-0.022** (0.010)	-0.024* (0.014)
DIVYLD	-0.930** (0.424)	-1.567** (0.620)	-0.527 (0.687)
TRACK	-0.006* (0.0035)	-0.006 (0.004)	-0.013 (0.028)
R&D	0.005 (0.019)	0.115*** (0.033)	-0.024 (0.022)
PROPSOLD	-0.166*** (0.048)	-0.146** (0.060)	-0.264*** (0.086)
AHC	-0.005 (0.012)	-0.020 (0.017)	-0.016 (0.021)
USM	-0.033 (0.021)		-0.056** (0.024)
LAGGED MKTRET	Y	Y	Y
YEAR DUMMIES	Y	Y	Y
INDUSTRY DUMMIES	Y	Y	Y
Adj. R-sqd	0.150	0.154	0.177
N	1427	616	539

Figure 1: Annual mean first-day returns of IPOs on the LSE 1946-86

Means are equally weighted.

**Figure 2: Demand curve for Renwick Wilton & Dobson IPO, November 1963**

The demand schedule is derived from Appendix 2 (i).



Appendix 1: Variable Definitions, Descriptive Statistics and Correlation Matrix

(i) Data sources

The primary sources for prospectus data for IPOs on the LSE including issue method, underwriting arrangements, IPO terms and issuing firm characteristics are the *Times Book of Prospectuses* (1946-79), the Singer and Friedlander *New Equity Issue Statistics* (1970-79) and the *Extel Book of New Issues* (1980-86). The offer price and the number of shares offered were checked against the *Stock Exchange Year Books*, the *Issuing House Year Books*, the *Times Digital Archive*, and *Lexus Nexus*. Strike prices of tenders were obtained from the latter two sources. Share prices used to calculate returns were taken from the *Stock Exchange Daily Official List* (SEDOL).

There are 2,061 IPOs between 1946 and 1986 in the sample, including 399 IPOs on the Unlisted Security Market (USM), a junior market established by the LSE in November 1980. USM IPOs were sourced from the data set assembled by Buckland and Davies (1990) and lodged with the ESRC, and supplemented from proprietary sources. In conformity with previous underpricing studies, there are a number of data exclusions: “penny” share IPOs with an offer price below 2 shillings, or 10 new pence (after decimalisation in 1972), which were prone to price manipulation; investment trusts (closed-end funds); new listings by firms already listed on another exchange; transfers from a junior market; introductions; and privatisations.

Analysis of underwriting arrangements in section I is based on 2,041 IPOs between 1946 and 1986, excluding 20 IPOs where underwriting arrangements were not clearly disclosed in the prospectus. Underwriting market shares in Table 1 are calculated in terms of the number of IPOs and of real IPO gross proceeds. I have treated placings as “underwritten” where the issuing house, or broker, has agreed at a specified price to take any shares not bought by investors. The analysis of IPO characteristics and underpricing in the rest of the paper is conducted on 1,455 IPOs between 1960 and 1986.

(ii) Variable definitions

Underpricing is defined as the first-day return adjusted for movement in the market as represented by the *Financial Times 30* and the *Financial Times All Share* indices. Firm size is post-IPO voting share market capitalisation (MCAP) at the offer price in 2005 prices. Firm age (AGE) is calculated from the foundation of the underlying business, where disclosed, or the date of incorporation of the firm, which usually occurs later. Both variables are transformed into their natural logarithms. Firm valuation is measured by the prospective dividend yield at the offer, or strike price (DIVYLD). If no dividend forecast is disclosed in the prospectus, then the historic dividend is used. The number of years historic profits disclosed in IPO prospectus (TRACK) is a measure of accounting disclosure. PROPSOLD is the number of shares offered at the IPO as a proportion of the total post-IPO shares outstanding, and VENDOR is the number of existing shares sold in the IPO as a proportion of post-IPO shares outstanding. Technology risk is defined by a dummy variable indicating whether or not the prospectus refers to the company undertaking research and development activity (R&D). The AHC dummy variable takes the value of 1, when an IPO is underwritten by a member of the Accepting Houses Committee, or, 0 otherwise, and measures underwriter reputation. TENDER is a dummy variable taking the value 1, if the IPO is by tender offer, and 0 otherwise. PLACING is a similarly defined dummy variable. Industry risk is proxied by the sector classifications from the *Stock Exchange Daily Official List* (SEDOL).⁷⁹ MKTRET is the return on the market over either the 30 days or 90 days prior to the first day of trading, where the market index is represented by the FT30 index up to December, 1968, and the FTSE All Share index thereafter. YEAR is a dummy variable for the year in which the IPO first trades on the LSE.

⁷⁹ 85% of IPOs in the sample were classified as “Commercial, Industrial, etc.” by the LSE. Merrett, Howe and Newbould (1967) did not find their 10 industry dummy variables explained any of the variation in underpricing, ch.7.

(iii) Descriptive statistics of IPOs 1960-86

	RETURN	AGE	LN(1+AGE)	MCAP £000	LNMCAP	DIVYLD	TRACK	R&D	PROP SOLD	VENDOR	AHC	TENDER	PLACING
Mean	0.144	35.193	3.196	38,450	16.718	0.049	7.215	0.124	0.312	0.211	0.287	0.081	0.427
Median	0.087	24.000	3.219	16,834	16.639	0.050	6.000	0.000	0.290	0.210	0.000	0.000	0.000
Maximum	1.978	256.000	5.549	1,930,000	21.383	0.161	12.000	1.000	1.000	1.000	1.000	1.000	1.000
Minimum	-0.710	0.000	0.000	771	13.556	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000
Std. Dev.	0.229	34.373	0.910	110,000	1.015	0.022	2.673	0.330	0.130	0.155	0.453	0.273	0.495
Skewness	2.764	2.087	-0.090	10.283	0.839	0.072	-0.159	2.275	1.850	0.978	0.941	3.069	0.293
Kurtosis	16.401	8.909	2.690	135.096	4.700	3.825	1.642	6.175	9.825	5.742	1.886	10.419	1.086
N	1455	1452	1452	1455	1455	1446	1455	1454	1455	1452	1435	1455	1455

(iv) Correlation Matrix 1960-86

[illegible]

Appendix 2: Renwick Wilton & Dobson Tender Offer Results 11 Nov. 1963

(i) No. of applications, shares applied for and prices tendered

405,000 shares were offered by S.G. Warburg on behalf of the company at a minimum price of 13s.. In total there were 3,968 applications for 6,230,900 shares. The detail regarding applications below 15.75s. was not disclosed.

Tendered Price (s.)	No. shares applied for	Cumulative no. shares	No. applications	Cumulative no. applications
30	200	200	1	1
26	5000	5,200	1	2
22	2400	7,600	7	9
21	1000	8,600	1	10
20	35000	43,600	49	59
19.75	200	43,800	1	60
19.5	400	44,200	1	61
19.25	13500	57,700	8	69
19	25500	83,200	35	104
18.75	20800	104,000	3	107
18.5	32800	136,800	12	119
18.25	25900	162,700	11	130
18	233800	396,500	89	219
17.75	29000	425,500	12	231
17.5	195800	621,300	73	304
17.25	104700	726,000	25	329
17	236900	962,900	150	479
16.75	59200	1,022,100	23	502
16.5	298400	1,320,500	154	656
16.25	158900	1,479,400	90	746
16	463800	1,943,200	368	1114
15.75	119900	2,063,100	100	1214
13-15.75	4,167,800	6,230,900	2754	3968

(ii) Basis of allocation

Tendered Price (s.)	Pro rata allotment	Maximum no. shares	Minimum no shares
18 and over	50%	3,000	200
17.75	50%	2,745	200
17 to 17.5	20%	1,000	200
15.75 to 17	20%	200	200
below 15.75	0%	0	0

Source: *The Times*, 12 November 1963, p.19.

Appendix 3: Robustness of regression results

Underpricing is defined as the first-day return adjusted for market movement. It is possible that underpricing may be underestimated if share prices of IPOs continue to rise relative to the market after the first day. This is not, however, the case. Levis (1993) found that mean partial first-month returns, namely, the change between the offer price and the share price at the end of the first month of trading and adjusted for the movement in the market index, did not differ statistically from mean first-day returns for the period 1980-88. I estimated partial first-month returns for IPOs over the whole period, and again the mean was not statistically significantly different from that for first-day returns.

When the dependent variable is the natural logarithm of one plus the first-day return adjusted for market movement, the estimated underpricing benefit of tenders is lower at 6.85% (1960-86), 8.02% (1960-69) and 5.34% (1980-86) and the coefficient on the tender dummy is statistically significant at the 1%, 1% and 10% levels respectively. To take account of outlying observations, I re-estimated the underpricing model by Weighted LS and applying a trimmed mean weighting function. This lowers the benefit of the tender method over public offers to 6.7%, whilst compared to placings the benefit increases to 5.8%. Both results are still highly statistically significant.

It is possible that the proxy measure of underwriter reputation, the AHC dummy variable, is endogenous in regressions with underpricing as the dependent variable.⁸⁰ The sign of the AHC dummy coefficient could be either negative, under the hypothesis that reputable issuing houses certify the quality of IPOs to new investors, or, positive, if the issuing houses exercise market power and extract underpricing rents. Endogeneity arises because firms liable to suffer higher underpricing are inclined to choose a reputable issuing house that can minimise the degree of underpricing. Without correction, this can lead to bias in the estimated coefficients of an underpricing model under OLS. Normally, this is dealt with by employing instrumental variables to estimate predicted underwriter reputation in the first stage of a two stage least

⁸⁰ Habib and Ljungqvist (2001)

squares regression of underpricing. In the period 1960-86, there is a lack of suitable instrumental variables which are uncorrelated with underpricing making such estimation infeasible.

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