THE IMPACT OF PRIVATIZATION ON CAPITAL MARKET DEVELOPMENT AND INDIVIDUAL SHARE OWNERSHIP

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Abstract

This study has two objectives: to estimate the impact of share issue privatizations on the growth of world capital markets (especially stock markets), and to examine the effect privatization has had on the pattern of share ownership by individuals and institutional investors. We begin by documenting the increasing importance of capital markets, and the declining role of commercial banks, in corporate financial systems around the world. We then show that privatization programs have had a dramatic impact both on the development of non-U.S. stock markets and on the participation of individual and institutional investors in those markets. Our research documents the following key points: (1) the fraction of **total domestic credit provided by the banking sector**, as a percent of GDP, remained virtually constant (125 percent) between 1990 and 1998 for the world as a whole, as well as for most major country groupings. (2) During that same time period, **stock market capitalization as a percent of GDP** increased from 52 to 82 percent for the world as a whole, and from 56 to 95 percent for high income countries. Market capitalization is now over $39 trillion, which almost certainly exceeds world capitalization. (3) **Share trading volume** (value of shares traded) increased even more dramatically, from 29.0 percent of world GDP in 1980 to 79.3 percent in 1998, when it reached $22.9 trillion. (4) The total **market value of privatized firms** grew from less than $50 billion in 1983 to almost $2.5 trillion in 1999—roughly 10 percent of the world's aggregate market capitalization, and 21 percent of the non-U.S. total. (5) Privatized firms are **the most valuable companies** in seven of the ten largest non-U.S. stock markets, including the four largest, as well as in most developing countries. (6) Share issue privatizations (SIPs) have transformed **international equity issuance and investment banking** practices. The 25 largest--and 35 of the 39 largest--common stock issues in history have all been privatizations, and governments have raised over $700 billion through some 750 SIPs since 1977--and over $1 trillion through all privatization methods. (7) Academic research has now clearly established that, in most countries, **SIP investors earn significantly positive excess** (market-adjusted) returns on the shares they purchase--over both short and long term holding periods. (6) Privatizations have dramatically increased the **number of shareholders** in many countries. Almost two-thirds of the 54 non-U.S. firms (67 including US companies) with over 500,000 shareholders are privatized companies, and roughly a dozen SIPs have more than 1,000,000 initial shareholders. SIPs generally have a far larger number of stockholders than do capitalization-matched private firms in the same country. (7) However, we also find that the extremely **large numbers of shareholders** created by many SIPs **are not a stable ownership structure**. For the 47 offers that initially yield over 250,000 shareholders, the total number of shareholders declines by one-third within five years.

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By any measure, the past two decades have been a golden age for financial capitalism. Two of the most dramatic manifestations of capitalism's intellectual and economic ascendancy have been the rapid growth in the total value and trading volume of the world's capital markets (especially stock markets) and the spread of privatization programs around the world. From fairly humble—and extremely controversial—beginnings during Margaret Thatcher's first British government in the early 1980s, privatization has developed into a robust, even orthodox, economic policy tool that at least 100 national governments have adopted to one degree or another. This popularity is at least partly due to the fact that privatization programs can generatre a great deal of revenue for governments, without having to raise taxes or cut spending programs. In fact, Gibbons (1998, 2000) reports that the cumulative value of proceeds raised through privatization programs by governments exceeded $1 trillion sometime during the second half of 1999, and the amount of such revenue raised each year by governments is now roughly $140 billion.

Although governments usually adopt privatization programs primarily to raise revenue, and in order to improve the (often dreadful) economic efficiency of former state-owned enterprises, most also hope that privatizations implemented through public share offerings will develop their national stock markets. Recent economic research (Levine (1997), Demirgüç-Kunt and Maksimovic (1998), Levine and Zervos (1998), Rajan and Zingales (1998), Subrahmanyam and Titman (1999) and Henry (2000a,b)) has given added impetus to this objective by conclusively documenting a direct link between capital market development and economic growth. A looming demographic crisis in the pay-as-you-go pension systems of many European and Asian countries has also lead to a dawning realization that broad and deep capital markets are a prerequisite for developing a funded pension system. Therefore governments have adopted share issue privatization programs as a means to jump-start the growth of these markets.

In spite of the obvious importance of capital market development, and of privatization's potential role therein, we are unaware of any academic study that has attempted to document or empirically examine this process. This study will make such an attempt, and is organized as follows. Section I documents that capital market-based finance has in fact been increasing in importance, at the expense of financial intermediary-based finance, in both developed and developing countries over the past decade. Section II examines the impact of privatization programs—particularly share issue privatization (SIP) programs—on capital market development since the early 1980s. Section III surveys existing academic research to determine whether SIP investors have earned significantly positive excess (market-adjusted) returns on the shares they purchase over both short-term (first trading day) and long-term (1,3, and 5-

year) holding periods. Section IV evaluates the impact of SIPs on individual and institutional share ownership in non-U.S. stock markets, and section V concludes.

I. The Rise of Capital Market-Based Finance

It has become something of a truism to assert that capital markets are "winning" the contest with financial intermediaries (especially commercial banks) to become the dominant sources of external financing for companies throughout the developed world. Like most truisms, there is a large grain of truth in this assertion. Unlike most truisms, there is very little reason to also say, "on the other hand.." since, as we will document below, capital markets are in fact winning the present and seem likely to totally dominate the future of corporate finance in developed and developing countries alike.

A. The Stable Role of Commercial Banking in Modern Economies

In a very influential article, Kaufman and Mote (1994) asked "Is banking (in the U.S.) a declining industry?" They provide a highly nuanced answer. As a direct provider of capital to American business, the market share of all financial intermediaries has been declining monotonically for more than a century—and this seems certain to continue. Other measures--such as the fraction of total assets held by intermediaries--show similar declines, with the market share of commercial banks showing special vulnerability. Other measures, however, tell a much rosier story about the enduring competitiveness of banks in American corporate life. Their share of total employment and of GDP has been either stable or rising for a quarter-century, and the economic importance of financial intermediation has been rising steadily as incomes have grown. Kaufman and Mote conclude that "banking," broadly defined, is not a declining industry, but that banking defined as the financing of American business most certainly is in a decline that is likely to prove terminal.

What about banking's role in other OECD countries, and in the developing world? To examine whether banking is gaining or losing "financial market share," Panel A of Table 1 documents the fraction of total domestic credit provided by the banking sector, as a percent of GDP, for various countries and groups of countries for the years 1990 and 1998. For the world as a whole, this fraction was 125.2 percent of "global GDP" in 1990 and 126.2 percent in 1998. While the importance of bank credit increased over this period for low-income countries, rising from 60.0 to 86.0 percent of GDP, it declined slightly for middle-income countries (from 57.9 to 52.9 percent) and remained virtually unchanged for high income nations (at around 140 percent of GDP). In other words, banking is maintaining an essentially static role in the global economy, though certain countries have experienced significant changes in the importance of bank lending as a percent of GDP. As examples, this ratio rose from 114.6

to 162.8 percent of America's GDP between 1990 and 1998, while it crashed from a remarkable 266.8 percent of Japan's GDP in 1990 to 137.4 percent in 1998.

****** Insert Table 1 about here ******

As is often the case, these aggregate measures of banking's significance in the world economy hide almost as much as they reveal, since they obscure which areas of banking have been growing and which have been shrinking. As it happens, the "plain vanilla" loan products provided by individual banks to individual borrowers have been declining steadily in importance, while provision of both risk management services and syndicated lending have been growing rapidly. Panel B details the dramatic increase in the total value of syndicated lending (and number of loans) over the period 1980-1999. This panel also documents that the syndicated loan market has come to play a vital "capital market" role of providing large-scale, rapid financing of many different types of sophisticated corporate investments, including acquisition financing. In 1980, barely 1,000 syndicated loans were arranged, and these raised only $83.0 billion. Only three of these loans were used to finance takeovers, and these raised a mere $700 million. By the late-1990s, between 7,000 and 10,000 loans were being arranged each year, and borrowers were routinely raising over $1.5 trillion annually—with between one-fourth and one-third of that amount being raised to finance corporate acquisitions.[1] In fact, the $1.73 trillion raised in 1999 was more than *twenty times* larger than 1980's total, and was equal to roughly five percent of global GDP.

To summarize, ordinary "relationship banking" appears to be (at best) holding its own as a source of corporate financing around the world, and is more likely in decline. The bits of banking that are growing rapidly are those parts which provide high value-added products (especially risk management tools) and provide large-scale syndicated credits to corporate borrowers. These findings are very important because, for many years, a debate has raged within academic finance regarding whether a capital market-based system of corporate finance is inherently better or worse than a bank-based system. During the late-1980s and early-1990s, when Japan and Germany appeared to be out-performing major capital market-oriented countries such as Britain and the U.S., the academic literature often favored bank-based systems. Examples of this literature include Prowse (1992), Kester (1992), and Porter (1992), while the supporting arguments are summarized in Maher and Andersson (1999). More recently, however, the weight of opinion has swung strongly in favor of the idea that capital markets have decisive comparative advantages over banks and other financial intermediaries as optimal monitors and financiers of a nation's corporate life. This reassessment has been driven in part by the observation, discussed at

[1] While the two databases used for Panels A and B of Table 1 do not permit direct comparison, it seems likely that the rising value of bank credit as a percent of American GDP between 1990 and 1998 documented in Panel A is a direct result of the rise of the syndicated loan market as a funding source for mergers and acquisitions. As we will show later, merger and acquisition activity surged in the U.S. during the 1990s, and most of the M&A loans in the *Loanware* file were in fact arranged for U.S. borrowers.

length above, that capital markets have been prospering relative to banks for many years now. The repetitive nature—and massive costs—of banking crises in developing and developed countries alike has also convinced many observers that banks are inherently fragile institutions, whose role in corporate finance should be minimized as much and as quickly as possible.

While experience and observation have driven much of the reassessment of the optimal role of capital markets in corporate finance, academic research has also been important since it now strongly favors capital markets over banks. The single most important paper in the stream of research documenting that capital markets are essential for good corporate governance is the survey article by Levine (1997). Additional papers by Levine and Zervos (1998), Rajan and Zingales (1998), the Demirgüç-Kunt and Maksimovic (1998) article discussed above, and Henry (2000) all direct or indirect support for the capital market optimality hypothesis. We now turn to documenting the astonishing rise of capital market-based financing since the early-1980s.

B. The Rapid Growth in Stock Market Capitalization and Trading Volume Since 1983

Table 2 describes the growth in the total market capitalization, and in the value of shares traded, on the world's stock exchanges over the 16-year period 1983 to 1999. This was a period of very rapid growth in the capitalization of markets in every country except Japan—which suffered a four-year, 70 percent decline in value after peaking at a value of $4.4 trillion in 1989. At year-end 1998, Japan's market was still only four times as valuable as it was in 1983, though an appreciation of the yen and a rise in share prices substantially increased the dollar value of Japanese stocks during 1999. By contrast, total world market capitalization increased almost eleven-fold (to $38.7 trillion) between 1983 and 1999, and the total capitalization of the U.S. market increased almost nine-fold (from $1.9 trillion to $16.6 trillion) over the same period. The growth in markets outside the United States was even greater, and it is also in these markets where privatization's impact has been greatest, since there have been only two significant share issue privatization (SIPs) in the United States in the modern era. The total capitalization of non-U.S. stock markets increased by fifteen times during the 1983-1999 period, rising from $1.49 trillion to $22.08 trillion. The total market capitalization of developing country stock exchanges increased by *23 times* between 1983 and 1998—even after declining slightly from 1997's peak value of $1.94 trillion to $1.91 trillion in 1998.

****** Insert Table 2 about here ******

As impressive as the rise in market capitalization has been, trading volumes have increased even more. The total value of shares traded worldwide increased over eighteen-fold between 1983 and 1998, rising from $1.2 trillion to almost $22.9 trillion. As before, non-U.S. markets experienced the greatest increases, with the value of shares traded on markets in developing countries rising from a mere $25 billion in 1983 to over $1.95 trillion in 1998. This *seventy-eight-fold* increase in market liquidity was

probably due to two factors: the increasing popularity of "emerging market" investing among western investors—particularly institutional investors such as pension and mutual funds—and the impact of large scale SIP programs.

Table 3 measures the rise of stock market capitalization somewhat differently—by expressing it as a percentage of national and world GDP. The aggregate market capitalization of the world's stock markets increased from 51.8 percent of global GDP in 1990 to 81.6 percent in 1998 (by the end of 1999, market capitalization almost certainly exceeded GDP). These overall figures hide even more dramatic individual stories, regarding both absolute valuation levels and rapid increases in relative valuation. As examples of strikingly high ratios of stock market capitalization to GDP, consider those of the Netherlands (121%), the United States (143%), the United Kingdom (158%), South Africa (143%), Switzerland (202%), and Hong Kong (261%). Equally revealing are countries with low valuation ratios, including Japan (54%), France (46%), Germany (39%), Italy (30%), and Austria (17%). Examples of countries that experienced dramatic increases in market capitalization relative to GDP between 1990 and 1997 include China (0.5 to 25%), Brazil (3.5 to 21%), New Zealand (20 to 162%), Australia (36 to 183%), and Sweden (43 to 120%). These increases in stock market valuation far exceeded any comparable growth in corporate profits or national output, and instead reflected a fundamental revaluation of the value of a nation's common equity.

****** Insert Table 3 about here ******

C. The Dramatic Growth in Securities Issuance Volume Since 1990

Another way of measuring the rise of capital markets is to examine whether their share of annual corporate financing activity has grown relative to that of other sources of funding. Section I detailed the stagnant market share of commercial banking in most countries, while Table 4 details the growth in the total value of securities issuance over the 1990-1999 period. This table clearly shows that the annual volume of global security issues has surged over the past decade, both worldwide and in the United States. Worldwide offerings of debt and equity securities total $504 billion in 1990 (and barely $300 billion in 1988); by 1998 this figure had quintupled to $2.53 trillion, and then climbed above $3.28 trillion in 1999. Even though security offerings by U.S. issuers accounted for two-thirds of the global total throughout this period, that still implies that non-U.S. securities issues increased from $191 billion in 1990 to $750 billion in 1998, and then to $1.19 *trillion* in 1999. The surge in non-U.S. issuance volume in 1999 was largely due to the popularity of euro-denominated bond issues, which actually exceeded dollar-denominated bond issues for the first three quarters of 1999. Such a six-fold increase in global security issuance is unprecedented in modern international financial history (though domestic bond issues often surge during major wars), and completely dwarfs the increase in bank financing during the 1990s.

****** Insert Table 4 about here ******

D. The Surge in Mergers and Acquisitions Worldwide

We conclude this examination of the growing importance of capital markets by documenting the almost incredible increase in the total volume of merger and acquisition activity that has occurred since 1990. Figure 1 details the rise in total value (of targets) of announced mergers and acquisitions on U.S. stock markets between 1990 and 1999. Even though the 1980s were considered a very active period for M&A, the 1990s dwarfed any other decade in American history. Total M& A value for the decade topped $5 trillion, with two-thirds of that being raised in 1998 and 1999 alone. While takeovers have always played an important role in the United States, the rise in M&A activity in Europe during the 1990s was even more dramatic. From less than $50 billion annually in the late-1980s, the total value of M&A involving a European target reached $592 billion in 1998, before more than doubling to $1.22 trillion in 1999—rivaling the $1.74 trillion U.S. total for that year. The total value of M&A activity in 1999 reached $3.4 trillion, an astounding ten percent of world GDP.

****** Insert Figure 1 about here ******

Having documented the growth of capital market based financing, we now attempt to determine how great a role privatization programs have played in promoting these markets. As we will see, these programs have significantly—often dramatically—impacted the development of most non-U.S. stock markets. Section IV then documents that share issue privatizations have truly transformed share ownership patterns of investors in many different countries.

II. Privatization's Impact on Stock and Bond Market Development

It would be easy to assert that privatization programs have been largely responsible for the growth, documented above, of stock and bond markets outside the United States—but this would probably be incorrect, and would certainly be simplistic. Obviously, we should be careful in inferring causation regarding privatization's impact on market growth, since a shift in ideology or some other exogenous political or economic change might have caused both the privatization and the overall boom. On the other hand, a careful examination of the historical evolution of non-U.S. stock markets since 1980 suggests that large SIPs have indeed played a key expansive role almost everywhere, especially because they are generally among the largest firms in national markets. This section first documents the size of privatization programs, then examines their impact on stock market capitalization and trading, and concludes with a description of the importance of SIPs as security offerings—and as catalysts for the growth of today's global investment banking industry.

A. Total Proceeds Raised by Privatization Programs

It is clear that national governments have been among the biggest winners from privatization programs, since these have dramatically increased government revenues—which is clearly one reason the policy has spread so rapidly. According to *Privatisation International* [Gibbon (1998, 2000)], the cumulative value of proceeds raised by privatizing governments exceeded $1 trillion sometime during the second half of 1999. As an added benefit, this revenue has come to governments without having to raise taxes or cut other public services. Figure 2 shows the annual revenues received from privatizations (mostly from share issues) since 1988. Annual proceeds grew steadily before peaking at over $160 billion in 1997; since then, proceeds seem to have equilibrated at an annual rate of about $140 billion.

****** Insert Figure 2 about here ******

The importance of this stream of revenues varies by country. Great Britain has raised about $85 billion from divestitures since 1979, with most of this windfall concentrated during the 1981-92 period, while Japan tops the charts with total proceeds of almost $150 billion since 1987. On the other hand, continental European governments only began to enjoy significant proceeds from privatization sales during the early 1990s, though these sales have often been very large both in absolute size and as a fraction of GDP. As examples, France and Italy have both raised over $60 billion since 1993, while Spain and Germany have raised roughly $50 billion. The absolute size of Portugal's divestment program has been smaller, but it has represented a much larger fraction of GDP. Expressed relative to the size of the economy, no region has witnessed as dramatic an impact from privatization as has eastern Europe. In Hungary, for example, privatization revenues since 1990 represent no less than 70 percent of GDP. More generally, the privatization programs of the last twenty years have significantly reduced the role of state-owned enterprises in the economic life of all countries, with most of this reduction in developing countries coming only during the 1990s. Megginson and Netter (2000) estimate that the SOE share of "global GDP" has declined from over ten percent in 1979 to less than six percent today.

B. Privatization's Impact on Stock Market Capitalization and Trading Volumes

While it is very difficult to establish a direct, cause and effect relationship between SIP programs and stock market development, indirect evidence suggests that the impact has been very significant. At the end of 1983, the total market capitalization of the handful of British, Chilean, and Singaporean firms that had been privatized by then was probably far less than $50 billion. By the middle of 1999, the 153 privatized firms listed in either the *Business Week* "Global 1000" ranking of the most valuable companies in developed-nation stock markets or in the *Business Week* "Top 200 Emerging Market Companies" ranking had a total market capitalization of $2.44 trillion. This was equal to approximately 10 percent of the combined market capitalization of the firms on the two lists, but was equal to over 21 percent of the non-U.S. total. This is because American firms accounted for 494 of the Global 1000 firms—and $11.3 trillion of the $19.7 trillion Global 1000 total capitalization.

It is almost certainly the case that privatized firms have an even greater impact on the development of non-U.S. stock markets than these aggregate numbers suggest, because they are generally among the largest firms in these markets. Also using the *Business Week* 1999 Global 1000 and Top 200 data, Table 5 details the total market value and relative size of the world's 30 most valuable privatized firms. Columns 1 and 2 detail the company names and domicile countries, while column 3 shows the firm's ranking in the Global 1000 list (firms from the Emerging Market list are given the ranking they would have if included in the Global 1000 ranking). Column 4 gives the firm's ranking within its home market, while column 5 lists the firm's total market capitalization. The final column expresses the single firm's market capitalization as a percentage of the entire national market's year-end 1998 capitalization (as detailed in the "Capitalization" section of the London Stock Exchange's website). Table 6 presents similar rankings of all 153 firms in the two *Business Week* lists, but details which of the ten most valuable companies in a nation's stock market are privatized firms.

****** Insert Tables 5 & 6 about here ******

Tables 5 and 6 clearly reveal the relative importance of SIPs in most non-U.S. stock exchanges. Privatized firms are the most valuable companies in Japan, Britain, Germany, France, Italy, Spain, Australia, Mexico, Singapore, China, Denmark, New Zealand, Portugal, Russia, Taiwan, Korea, Argentina, Brazil, Greece, Malaysia, Poland, the Czech Republic, Hungary, Turkey, Chile, Indonesia, Venezuela, and Pakistan. They are the second most valuable firms in many other countries—including Austria, Finland, Hong Kong, the Netherlands, and Israel. Privatized companies are the first *and* second most valuable companies in eleven countries—including Japan, Britain, Singapore, and Korea—and they occupy the three top slots in Italy, Portugal, Russia, and Argentina. Table 5 also reveals that the largest privatized firms by themselves often account for sizeable fractions of the total capitalization of national stock markets, even in advanced countries such as Germany (10.5%), Italy (11.8%), Spain (14.8%), Singapore (15.8%), and Australia (19.4%). In emerging markets such as Korea (17.2%) and Mexico (36.3%), individual privatized firms often account for very large fractions of the total national market capitalization.

C. Privatization's Impact on International Investment Banking

Very few people realize just how large SIP offerings frequently are, both in absolute size and relative to private sector stock offerings in various national markets. As Table 7 shows, the 25 largest--and 35 of the 39 largest--share offerings in history have all been privatizations. No fewer than 30 SIPs have been larger than the biggest U.S. share offering, the $5.5 billion UPS initial offering in November 1999, and Jones, et al. (1999) document that 112 SIPs have raised at least $1 billion (a stock offering size rarely observed in the United States). Twenty-three SIPs have raised more than $7 billion--a feat no private-sector issuer has ever achieved. In total, governments have raised more than $700 billion through

some 750 public share offerings since 1977. Outside of the entire U.S. corporate sector, this is an unprecedented volume of common equity issuance, and it has fundamentally changed the nature of global stock market trading and investment.

****** Insert Table 7 about here ******

We now examine whether investors who purchase SIPs experience positive initial and long-run returns. This is obviously a great concern for governments wishing to making ongoing sales of SOEs. It is also important for all nations wishing to develop an "equity culture," or broadly based class of investors willing to purchase common stock offerings—especially IPOs from entrepreneurial growth companies.

III. The Initial and Long Term Return to Investors in Share Issue Privatizations

As documented in Megginson and Netter (2000), governments generally rely on share offerings as the best method of privatizing large state-owned enterprises, and they routinely adopt highly politicized offer terms in order to achieve political objectives. This tendency to utilize offering terms that differ fundamentally from those observed in private-sector offerings, coupled with the very large average size of privatization issues, has enticed numerous researchers into examining the initial and long term returns earned by SIP investors. We summarize the empirical results for initial (first day) returns in sections A below, followed by a discussion of long-run returns in section B.

A. Initial Returns to Investors in Share Issue Privatizations

The results of eight studies examining initial returns are summarized in Megginson and Netter (2000, hereafter MN). Most of these studies evaluate whether investors who purchase privatization initial public offerings (PIPOs) at the offering price, and then sell these shares on the first day of open market trading, earn returns that are significantly different from zero. A few also test whether PIPOs yield initial returns that are materially different from the significantly positive first-day returns earned by investors in private-sector IPOs, as documented in a vast number of articles using both U.S. and international data.

Four of the studies summarized in MN examine PIPO returns from individual countries: Great Britain [Menyah and Paudyal (1996)], Malaysia [Paudyal, Saadouni and Briston (1998)], China [Su and Fleisher (1999)], and Hungary [Jelic and Briston (2000)]. All four studies document significant, often massive, average levels of underpricing, ranging from 39.6 percent for the 40 British PIPOs studied by Menyah and Paudyal to *940 percent* for the 308 Chinese PIPOs examined by Su and Fleisher. Menyah and Paudyal and Paudyal, Saadouni and Briston find that UK and Malaysian PIPOs are significantly more underpriced than their private-sector counterparts. Hungarian PIPOs are also more underpriced than private IPOs, but the difference is not significant. Since there are as yet no truly private-sector IPOs in China, Su and Fleisher cannot test whether private offerings would also have the incredible underpricing

they document for PIPOs, but they do point to an intriguing rationale for this phenomenon based on the signalling model presented in Welch (1989). Unlike almost any other comparable group of IPOs, over 90 percent of Chinese PIPOs do in fact execute seasoned equity offerings within a short time after the PIPO.

The other four studies discussed in MN examine multi-national samples of PIPOs, generally using offering data from *Privatisation International* and stock returns from *Datastream*. The number of countries studied ranges from eight in Dewenter and Malatesta (1997) to 59 in Jones, et al. (1999), though the studies yield reassuringly similar principal results. All four document economically and statistically significant underpricing of PIPOs, averaging about 30 percent in the large-sample studies, and the two that examine seasoned SIPs (Huang and Levich (1998) and Jones, et al.) find these are significantly underpriced as well, though much less so than are PIPOs. Three of these studies—Dewenter and Malatesta (1987), Huang and Levich (1998), and Choi and Nam (2000)—also test whether PIPOs are significantly more underpriced than private-sector IPOs. They find no systematic evidence that PIPOs are significantly more or less underpriced than private IPOs; instead all three suggest that results vary by country. In sum, SIPs appear to be significantly and deliberately underpriced by issuing governments, though it appears the underpricing occurs for different reasons than is the case for private sector IPOs.

The principal objective of the Jones, et al. (hereafter JMNN) study differs from the others detailed above in that it tests whether government issuers are attempting to maximize SIP offering proceeds or are instead trying to achieve multiple political and economic objectives—even at the cost of revenue maximization. JMNN, whose results are summarized in Table 8, provide evidence of how political factors impact the offer pricing, share allocation and other terms in share issue privatizations (SIPs). The results are consistent with the predictions of the Perotti (1995) and Biais and Perotti (1999) theoretical models. One very striking result JMNN document is the sheer size of SIP offers. Whereas other U.S. and international stock offering studies find average issue sizes in the range of $13-$48 million, the average (median) size of the initial SIPs in JMNN is $555.7 million ($104.0 million) and the mean size of seasoned issues is $1.069 *billion* (median $311.0 million).[2] Additionally, tests using the pricing variables reveal that SIPs are significantly (and deliberately) underpriced by government sellers. The mean level of underpricing for initial SIPs--those where shares are sold to the public for the first time (unseasoned issues)--is 34.1 percent (median 12.4 percent), and even the seasoned SIP offers are underpriced on average by 9.4 percent (median 3.3 percent). Using two-stage least squares methodology, JMNN find that

[2] For example, Ritter (1991) and Loughran and Ritter (1995) find that average U.S. IPOs range in size from $13 to $31 million, while Asquith and Mullins (1986) and Spiess and Affleck-Graves (1995) document average U.S. seasoned equity offering sizes of between $26 and $39 million. Loughran, Ritter, and Rydqvist (1994) and others note that international (mostly private-sector) IPOs have an even smaller average size.

initial returns (underpricing) are significantly positively related to the fraction of the firm's capital sold and to the degree of income inequality (Gini coefficient) in a country. They also find that initial returns are negatively related to the level of government spending as a fraction of GDP (a proxy for how socialist a society is) and to a dummy variable indicating that more than 50 percent of a company's stock is being sold. Collectively, these findings strongly support the predictions of Perotti (1995) and Biais and Perotti (1999). The finding that issue size, measured various ways, *does not* significantly impact underpricing clearly indicates that initial returns in SIPs are not being driven by asymmetric information between issuers and investors over firm asset quality and growth prospects--as various authors have found to be the case for private-sector offerings.

****** Insert Table 8 about here ******

Additional evidence supporting the "political" nature of SIP pricing comes from the observation that governments rely almost exclusively on fixed price offerings, despite the fact that they could raise far more revenue through a competitive tender offer.[3] JMNN find that, on average, 85 percent (median 100 percent) of the initial and 61 percent (median 100 percent) of the seasoned offers are sold at a fixed price, and where tender offer pricing is observed it invariably is used only for the foreign tranche of a SIP. The 4.4 percent mean (3.3 percent median) level of costs of sales as a percent of an issue (mostly cash expenses and underwriter discounts) that JMNN document is also surprisingly low. In fact, this is significantly lower than similar levels observed in private-sector stock offerings by Ibbotson, Sindelar, and Ritter (1994) and Lee, Lochhead, Ritter, and Zhou (1996). Low selling costs make sense if government issuers deliberately underprice SIP offers, because then the underwriters bear little risk the offer will fail and they will be left holding unsold shares. Underpricing also tends to be less politically objectionable than the more transparent underwriting discounts and expenses.

B. Long-Run Returns Earned by Investors in Share Issue Privatizations

Since the seminal article by Ritter (1991), financial economists have begun to pay a great deal of attention to estimating the long-run returns earned by investors who purchase unseasoned and seasoned issues. The vast majority of these papers document significantly negative long-term returns, whether they examine U.S. offerings or international stock issues, though a few studies document insignificantly positive long-term performance.[4]

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[3] On the other hand, Benveniste and Wilhelm (1997) show that fixed-price offers have an advantage over book-building techniques used in the U.S. stock market in that they are less likely to fail at the offer price.

[4] Early long-run return studies, using both U.S. and international data, are summarized in Loughran, Ritter and Rydqvist (1994). Later studies employing U.S. data, and finding negative long-run returns, include Loughran and Ritter (1995, 1997), Spiess and Affleck-Graves (1995) and Carter, Dark, and Singh (1998). Only a handful of U.S. studies, including Brav and Gompers (1997), find

There is a major debate in the empirical finance literature on methodological issues in estimating long-run returns (see Barber and Lyon (1997a), Kothari and Warner (1997), Canina, Michaely, Thaler, and Womack (1998), Lyon, Barber, and Tsai (1999) and Fama (1999)). This is not surprising since findings of significant negative (or positive) long-run returns can be interpreted as evidence that questions the efficient market hypothesis, a fundamental concept in finance. The debate centers on how to calculate long-run returns and how to construct test statistics. Since the methodological problems identified with estimates of long-run return have not been resolved for U.S. firms, they have not been resolved for privatizations. The only real solution is building a body of evidence using various methodologies. The reader should thus consider the results of any individual study very skeptically, including those discussed in this section. On the other hand, since almost all these studies document significantly positive long-run returns, this suggests that SIP investors have in fact done rather well over time.

Megginson and Netter (2000) survey thirteen studies that examine the returns earned by investors who buy and hold privatization share issues. Six of these focus on either a single country or a single market for issues, while the other seven examine multi-national samples. We discuss the focused studies first. Two papers examine the British experience--Levis (1993) and Menyah, Paudyal, and Inganyete (1995)—and both document significantly positive long-run abnormal returns for SIP investors, though Aggarwal, Leal, and Hernandez (1993) find the opposite result for their sample of nine Chilean SIPs. Jelic and Briston (2000) find that 25 Hungarian PIPOs yield large but insignificantly positive long-run returns (peaking at 21.3 percent in month 15), though they do find that these cumulative returns are significantly higher than the highly negative returns (reaching –70 percent by month 30) earned on 24 private-sector IPOs. Foerster and Karolyi (1999) find insignificant long-run returns--compared to local benchmarks--for privatization stocks listing in the U.S. in the form of American Depository Receipts (ADRs). The returns are significantly negative compared to U.S. benchmarks. Finally, Paudyal, Saadouni and Briston (1998) find that investors earn insignificant long-term returns on 18 Malaysian PIPOs, as well as on 77 private-sector IPOs.

Two of the multi-national studies surveyed by MN focus on long-run returns earned by investors in SIPs from developing countries, while a third examines only western European offerings. Boubakri and Cosset (1999) study returns from 120 SIPs from 26 developing countries, while Perotti and Oijen (2000) develop and test a model of long-term returns using data from 20 developing nations. Both studies document large, highly significant long-run returns, though the mean 112 percent 3-year return found by Boubakri and Cosset is not significant once the returns from national markets over the corresponding time periods are subtracted out (once the absolute returns are converted into market-adjusted, or excess returns). This is primarily due to the extremely large weightings that SIPs themselves have in most

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(insignificantly) positive long-term returns.

developing-country national stock market indices. Perotti and Oijen document significantly positive market-adjusted returns, and argue that this results from a progressive resolution of political risk as governments refrain from expropriating investors' wealth in privatized firms—as had been feared. Their proxy for political risk declines by an average of 3.6 percent annually during the course of a privatization program, and this leads to positive excess returns for SIPs of about 6 percent per year. Finally, Davidson (1998) documents that large European SIPs began to out-perform market indices in five countries during the mid-1990s, but did so only after an extended period of sub-par performance.

The remaining four long-run return studies employ multi-national samples that cover a large number of countries and regions. Megginson, Nash, Netter, and Schwartz (2000) examine the long-run buy-and-hold returns earned by domestic, international, and U.S. investors who purchase shares at the first open-market price in 158 share issue privatizations (SIPs) from 33 countries during the period 1981-1997. They use several benchmarks and compute one, three, and five-year local currency and US dollar net returns with respect to domestic, international, US market indices, and industry-matched comparison samples. They find statistically significant positive net returns for the 158 unseasoned SIPs for all holding periods and versus all benchmarks. The key results from this study are summarized here in Table 9. Boardman and Laurin (2000), Choi, Nam and Ryu (2000) and Dewenter and Malatesta (2000) find similar results. All four studies document significantly positive market-adjusted returns over holding periods of up to five years. In general, British privatizations yield higher long-run returns than do non-U.K. initial and seasoned SIPs, and British utilities yield the highest returns among the U.K. offerings, but the net return is significantly positive for most non-U.K. sub-samples as well. These studies, combined with those cited earlier, collectively support the conclusion that the average long-term, market-adjusted return earned by international investors in share issue privatizations is economically and significantly positive. Apart from Perotti and Oijen, however, few of these studies can offer any convincing explanation of precisely *why* SIP issues out-perform over time, and isolating one or more specific cause-and-effect relationships is likely to prove extremely difficult. Most likely, these excess returns result from a gradual resolution of uncertainty on the part of investors regarding both the micro-economic success of privatization programs and the ability of governments to resist the temptation to expropriate shareholder wealth in privatized firms through direct intervention, or through targeted regulation or taxation.

****** Insert Table 9 about here ******

IV. The Impact of Privatization on Individual and Institutional Share Ownership

One aspect of privatization programs which has to date attracted surprisingly little academic interest is its observed capacity to tremendously increase the total number of shareholders in a country. In

many cases, a single privatizing share issue will yield over 1,000,000 shareholders—usually in countries with little tradition of share ownership by individual investors. In fact, governments explicitly design SIP offers to attract individual citizen/investors, and they favor certain groups (especially the employees of companies being privatized) with preferential share allocations and pricing. Many governments have also voiced a desire to promote an "equity culture," meaning a greater willingness to support entrepreneurship through share ownership, as one of the chief rationales for adopting privatization programs. We therefore wish to examine the pattern of share ownership in privatized firms, and also study how this ownership structure evolves over time. Tables 10 and 11 present the results of this examination for developed and developing countries, respectively.

****** Insert Tables 10 and 11 about here ******

Table 10 compares the numbers of stockholders, and the number and fractional ownership of institutional investors, in the privatized firms in the *Business Week* Global 1000 list (discussed in section II above) to capitalization-matched private sector firms from the same national markets. Table 11 presents a similar comparison, but does not examine institutional shareholdings due to lack of data. For each privatized firm, we select as a match that private-sector company with the closest total market value in the *Business Week* lists, and we then collect the most recent data on the total number of shareholders for both sets of firms from the June 1999 *Worldscope Disclosure* CD-ROM database. While this data item is far from universally available, we are able to collect values for 97 of the 153 privatized companies, and for 99 of the matching privately owned firms. In the majority of those cases where data is available for both the privatized and the matching firm, the privatized company had a much larger number of shareholders, in spite of the fact that governments usually retain sizeable stakes in these firms. This reduces the effective total capitalization of privatized firms, since these stakes remain unsold to private investors.

We use the Wilcoxon signed-rank test to show that the mean number of shareholders of the privatized firms is significantly higher than that of the non-privatized matching firms. The frequency distribution of the number of shareholders in the *Global Company Database* on *WorldScope* is strongly skewed to the left. Roughly 91 percent of the 6,410 companies with data on the number of shareholders have less than 50,000 shareholders, 7.2 percent have between 50,000 and 250,000, and 1.8 percent have more than 250,000. The frequency distribution of the capitalization of our sample of privatized and matching non-privatized firms is also markedly skewed to the left. However, we focus on the companies with the highest market capitalizations, which also tend to have the largest number of shareholders, implying a higher proportion of companies with more than 250,000 shareholders. Due to the limited availability of information on the number of shareholders--especially for the large, traditionally widely held companies--we are able to construct a sample with complete information on both privatized and non-privatized companies for only 86 pairs. Using these pairs, we conclude that the number of shareholders of

the privatized companies is significantly higher, at the 0.01 level, than the number of shareholders in the matching private-sector (non-privatized) sample companies.

There are three peculiar cases among the non-privatized companies that have very large numbers of shareholders: Britain's Abbey National and Woolwich, with 2,028,141 and 1,216,932 stockholders, respectively, and Brazil's Banco Bradesco, with 2,414,603 stockholders. All three of these companies are financial institutions, and the two British firms were very large "de-mutualizations" that by their very nature created a great many new shareholders out of depositors. We do not exclude these companies, and our testing procedure takes into account the magnitude of the differences between the number of shareholders of every pair. Even including these three firms, however, we still find that SIPs have (highly) significantly more shareholders than do the matching firms. The complete sub-sample constructed from Table 5 shows that the matching private companies have a total market capitalization of $1.2 trillion and 14 million shareholders, whereas the total market capitalization of the privatized firms ($1.6 trillion) is held by more than twice as many shareholders (37.6 million).

Table 10 also compares institutional shareholdings in developed-country privatized firms to those of the matching private-sector companies. The mean (293 versus 281) and median (242 versus 231) number of institutional investors in the privatized and matching firms is surprisingly close. The same is true for mean (15.46 versus 15.78 percent) and median (12.81 versus 12.79 percent) percent shareholdings by these institutional investors. Using the Wilcoxon tests of paired differences, we cannot reject the null hypothesis that the means and median values are equal at conventional significance levels. The fact that governments retain sizeable stakes in privatized firms—making the shares available for trading substantially smaller than for matched firms—suggests that institutional investors are at least as interested in investing in privatized companies as they are in private sector firms of similar size.

We also examine how the total number of shareholders in a company evolves during the years subsequent to a SIP (a table detailing this information is available as an appendix upon request). We collect shareholding data for up to seven years after each privatization, using as a sample those SIPs provided by *Privatization International*, or in the Appendix to the Megginson and Netter (2000) survey paper. The pattern thus observed represents one of the most important, and surprising, results of this study—since we demonstrate that the extremely large numbers of shareholders created by many SIPs are not a stable pattern of corporate ownership! We test whether the number of shareholders declines significantly in SIPs in the first year after an issue. For the group of SIPs with less than 100,000 initial stockholders, we are unable to reject the null that the number of shareholders does not change from Year 0 to Year 1. It thus appears that those offerings which yield a reasonable number of shareholders (between 10,000 and 75,000, depending upon the country) do not demonstrate strong tendencies to change in

subsequent years. Some of these firms experience increases in the number of shareholdings, while others experience slight declines.

We normalize the number of shareholders in Year 0 to 1.00, and then measure the number of shareholders in subsequent years as a ratio of Year 0's value. This yields a value less than, greater than, or equal to 1.00 depending upon whether the number of shareholders has increased, decreased, or remained constant. Then we plot the mean coefficients for all SIPs. Figure 3 shows the dynamics of share ownership in the full sample—and in various subsamples--of privatized firms. We observe slight increases in all years subsequent of Year 0, and an increase of 23% in Year +6, for the subgroup of SIPs with less than 100,000 shareholders. This result is not testable, however, because we have very few data items for Year +6, due to the short periods between offerings of the same company or the recent character of SIPs. All we can conclude for the SIPs with less than 100,000 initial holders is that there is no statistically significant decrease from Year 0 to Year +1, and there appears to be a tendency for the number of shareholders to increase over time.

****** Insert Figure 3 about here ******

However, this is far from true for the 39 SIPs which yield over 100,000 shareholders. In these cases the total number declines dramatically and steadily. We estimate that the total number of shareholders in these highly politicized privatizations declines by 33 percent within five years of the share offering (Figure 1). Again we only have sufficient data to test whether the number of shareholders changes significantly during the first post-issue year. We document a significant (at the 0.01 level) decline in the number of shareholders for those SIPs with more than 100,000 initial stockholders. Since we reject the null at the 0.01 level for the whole sample as well, we may attribute this to the higher weight of the companies with larger stockholder bases.

The implications of this finding for government efforts to develop an equity culture are unclear. It is certainly true that many new stockholders do not retain the shares they purchase. Further, other evidence suggests that retail investors in privatizations generally own only that one stock—hardly indicative of a rising class of well-diversified shareholders. On the other hand, since the studies detailed in section III document that the long-run returns to investors in SIPs are strongly positive, this implies that retail investors' first experience in stock market trading is a very positive one (earning a capital gain). Furthermore, the fact that governments are able to entice large numbers of investors to return for subsequent share offerings suggests that these programs are indeed creating stock markets capable of absorbing large new stock issues—just as the governments had hoped.

We next compare the dynamics of share ownership of privatized and non-privatized firms. It is not possible to replicate the format of the SIP's share-change table for the non-privatized (private sector) companies because we need to match the IPO of the privatized firms with a similar event for the non-

privatized firms. Although the private companies have had a few new issues or stock splits, indicative of increases in the shareholder base, it is impossible to find sufficient matches with respect to market capitalization, timing of the new issue, and occurrence of a share offering. We thus examine the dynamics of share ownership for the non-privatized firms over the ten-year period 1989 – 1998. The private firms have enough data to examine the dynamics over the entire 10-year period, and these are presented in Figure 4. In constructing the dynamics table for the non-privatized companies, we move the data series for a particular company that does not have an entry for 1989 so that it begins at Year 0.

****** Insert Figure 4 about here ******

As can be seem in Figure 4, the number of shareholders in non-privatized firms does not change over the first year, but it also seems to increase in subsequent periods. Yet we cannot reject the null that the number of shareholders in Year 0 and Year 1 up to Year 5 is the same. The first significant (at the 0.05 level) increase is recorded for Year 6, and in Year s 7 and 8 we find significant increases at the 0.01 level. These results suggest an initially stable number of stockholders in non-privatized companies during the early 1990s, that eventually increases. Breaking up our sample into sub-samples with less than 100,000 and more than 250,000 stockholders in Year 0 reveals two different patterns. The former sample shows an increase in the number of shareholders, with a cumulative increase of more than 60% by the final year, while the latter sample shows a cumulative decrease of more than 20%. The decline in shareholder numbers is consistent with increasing institutionalization of ownership for large capitalization firms, and we will explore this possibility in our ongoing research. Unfortunately, we currently have too few private companies with a large number of shareholders, and we cannot use any meaningful testing procedure to determine whether the decline in shareholder numbers is significant. However, the reported patterns suggest that share ownership in private firms is increasing with time, though we find that the shareholder base of the largest companies decreases. To summarize, we have documented a significant decrease in the number of shareholders of the SIPs in our sample (especially those with 100,000+ initial stockholders), contrasting with an increasing shareholder base for the non-privatized matching companies.

V. Summary and Conclusions

This paper examines the impact of share issue privatizations (SIPS) on the growth of world capital markets (especially stock markets), and studies privatization's impact on the pattern of share ownership by individuals and institutional investors. We begin by documenting the increasing importance of capital markets, and the declining role of commercial banks, in corporate financial systems around the world. We then show that privatization programs—particularly those involving public share offerings—

have had a dramatic impact both on the development of non-U.S. stock markets and on the participation of individual and institutional investors in those stock markets.

Our research documents the following key points: (1) the fraction of total domestic credit provided by the banking sector, as a percent of GDP, has remained virtually constant (125 percent) since 1990 for the world as a whole, as well as for most major country groupings. During that same 1990-98 time period, stock market capitalization as a percent of GDP increased from 52 to 82 percent for the world as a whole, and from 56 to 95 percent for high income countries. (2) Share issue privatizations (SIPs) contributed significantly to the nearly elevenfold increase, from $3.4 trillion to $38.7 trillion, in the total capitalization of the world's stock markets that occurred between 1983 and 1999. During that same period, the aggregate valuation of SIPs had grown from less than $50 billion in 1983 to almost $2.5 trillion—nearly 10 percent of the world's total, and over one-fifth of the non-U.S. total ($13.6 trillion). SIPs also played a significant role in the even more dramatic increase in global stock market trading volume, from $1.23 trillion in 1983 to $42.7 trillion in 1999. (3) Privatized firms are the most valuable companies in seven of the ten largest non-U.S. stock markets, including the four largest, as well as in most developing countries. (4) SIPs have transformed international equity issuance and investment banking practices. The 25 largest--and 35 of the 39 largest--common stock issues in history have all been privatizations, and governments have raised over $700 billion through some 750 SIPs since 1977. (5) Academic research has now clearly established that, in most countries, SIP investors earn significantly positive excess (market-adjusted) returns on the shares they purchase--over both short and long term holding periods. (6) Privatizations have dramatically increased the number of shareholders in many countries. Almost two-thirds of the 54 non-U.S. firms (67 including US companies) with over 500,000 shareholders are privatized companies, and roughly a dozen SIPs have more than 1,000,000 initial shareholders. SIPs generally have a far larger number of stockholders than do capitalization-matched private firms in the same country. (5) However, we also find that the extremely large numbers of shareholders created by many SIPs are not a stable ownership structure. For the 47 offers that initially yield over 250,000 shareholders, the total number of shareholders declines by one-third within five years.

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Table 1: The (Stable) Role of Commercial Banks in the World Economy

This table presents summary measures of the role of the commercial banking sector in the financing of corporate activity in various countries, and on a global basis. Panel A expresses the amount of domestic credit provided by banks, as a percent of GDP, for the two years 1990 and 1998. Source: World Bank, "World Development Indicators 2000." Panel B details the growth of syndicated lending worldwide, and breaks down the fraction of all syndicated lending being arranged to finance mergers and acquisitions. Source: "Loanware databse," Capital DATA Corporation, London.

Panel A: Domestic Credit Provided by the Banking Sector as a Percent of GDP, 1990 vs. 1998

Region or Country	**1990**	**1998**
Low Income	60.0	86.0
Excluding China & India	38.1	37.4
Middle Income	57.9	52.9
High Income	140.0	140.4
France	106.1	103.3
Germany	108.5	145.8
Japan	266.8	137.4
Switzerland	179.0	177.2
United Kingdom	123.0	129.3
United States	114.6	162.8
World	**125.2**	**126.2**

Panel B: Total Volume of Syndicated Lending Worldwide, 1980-1999

Year	**Total number of Syndicated Loans**	**Total Value of Loans, $US Billions**	**Number of Loans for M&A**	**Value of M&A Loans, $US Billions**	**Value of M&A Loans as % of Total**
1980	1,068	$83.0	3	$0.7	0.8%
1981	1,508	171.2	5	2.3	1.3
1982	1,625	149.5	13	2.6	1.7
1983	1,175	92.2	7	1.5	1.6
1984	1,676	180.0	38	51.2	28.4
1985	1,358	189.0	29	21.6	11.4
1986	1,316	169.3	122	48.5	28.7
1987	1,753	249.3	151	43.0	17.3
1988	2,453	383.5	414	121.8	31.8
1989	3,470	399.4	685	125.6	31.5
1990	4,250	420.1	539	59.6	14.2
1991	4,509	400.2	401	35.6	8.9
1992	5,603	427.8	447	27.5	6.4
1993	5,289	535.9	460	39.3	7.3
1994	6,306	796.5	780	92.3	11.6
1995	6,896	1,129.7	856	170.6	15.1
1996	8,540	1,360.8	1,039	194.6	14.3
1997	9,598	1,704.9	1,143	273.7	16.1
1998	8,778	1,453.6	1,821	359.4	24.7
1999	7,995	1,733.9	2,053	528.6	30.5
Total	**87,837**	**$12,169.0**	**11,533**	**$2,213.0**	**18.2%**

Table 2: The Growth of World Stock Market Capitalization and Trading Volume, 1983-1999

This table details the growth in the aggregate market capitalization and trading volume, in $US millions, over the 16-year period 1983-1999. Market capitalization figures are year-end values, translated from local currencies into US$ at the contemporaneous exchange rate, while trading volumes represent the total value of all trades executed during the year. Data sources: 1983-1998, the World Bank's *Emerging Markets Fact Book* (various issues); 1999 data from the Statistics section of the Federation of International Stock Exchange's website (www.fibv.com).

Market Capitalization	**1983**	**1986**	**1989**	**1992**	**1995**	**1998**	**1999**
Developed Countries	3,301,117	6,378,234	10,957,463	9,921,841	15,842,152	24,530,692	NA
United States	1,898,063	2,636,598	3,505,686	4,485,040	6,857,622	12,926,177	16,645,387
Japan	565,164	1,841,785	4,392,597	2,399,004	3,667,292	2,495,757	4,455,348
United Kingdom	225,800	439,500	826,598	927,129	1,407,737	2,372,738	2,954,816
Developing Countries	83,222	135,056	755,210	1,000,014	1,939,919	1,908,258	NA
Total World	**3,384,339**	**6,513,290**	**11,712,673**	**10,921,855**	**17,782,071**	**26,519,773**	**38,725,685**
World, ex. US	1,486,276	3,876,692	8,206,987	6,436,815	10,924,449	13,593,596	22,080,298
US as % of World	56.1%	40.5%	29.9%	41.1%	38.6%	48.7%	43.0%
Trading Volume							
Developed Countries	1,202,546	3,495,708	6,297,069	4,151,573	9,169,761	20,917,462	NA
United States	797,123	1,795,998	2,015,544	2,081,658	5,108,591	13,148,480	23,457,042[a]
Japan	230,906	1,145,615	2,800,695	635,261	1,231,552	948,522	1,644,964[a]
United Kingdom	42,544	132,912	320,268	382,996	510,131	1,167,382	3,635,485[a]
Developing Countries	25,215	77,972	1,170,928	631,277	1,046,546	1,956,858	NA
Total World	**1,227,761**	**3,573,680**	**7,467,997**	**4,782,850**	**10,216,307**	**22,874,320**	**42,701,814[a]**
World, ex. US	430,638	1,777,682	5,452,453	2,701,192	5,107,716	9,725,840	19,244,772[a]
US as % of World	64.9%	50.3%	27.0%	43.5%	50.0%	57.5%	54.9%[a]

Notes: [a] Trading volume for 1999 computed as annualized value of average trading volume for January and December 1999.

Table 3: Stock Market Capitalization and Trading Volume as a Percent of GDP, 1990 vs 1998

This table details stock market capitalization and the value of shares traded, as percentages of GDP, for national economies, the world, and for major groupings of economies.

Country or Region	Market Capitalization as % of GDP		Volume of Shares Traded as %of GDP	
	1990	1998	1990	1998
Low Income	**10.9**	**8.2**	**5.2**	**31.2[a]**
Middle Income	**19.4**	**37.1**	**5.1**	**31.2[a]**
Argentina	2.3	14.0	0.6	4.7
Brazil	3.5	21.2	1.2	19.3
Chile	45.0	72.8	2.6	6.2
China	0.5	24.9	0.2	30.7
Egypt	4.1	30.7	0.3	6.3
Hungary	1.5	30.7	0.3	35.3
Jamaica	21.5	48.8	0.8	1.0
Jordan	49.8	84.1	10.1	9.5
Malaysia	113.6	134.2	25.4	36.1
Mexico	12.4	24.1	4.6	8.9
Nigeria	4.8	8.0	0.0	0.4
Philippines	13.4	44.7	2.7	12.7
Russian Federation	0.0	6.1	--	2.0
South Africa	128.9	143.1	7.6	49.1
Thailand	28.0	26.0	26.8	15.4
Turkey	12.7	16.8	3.9	34.2
Venezuela	17.2	9.4	4.6	1.9
High Income	**56.4**	**95.0**	**32.4**	**91.3**
Australia	36.2	183.1	13.2	107.0
Hong Kong, SAR	111.5	261.1	46.3	130.0
France	26.3	46.0	9.8	39.0
Germany	22.9	38.9	22.1	65.5
Italy	13.6	29.6	3.9	40.8
Japan	98.2	54.2	54.0	23.2
Netherlands	42.2	120.6	14.2	97.6
New Zealand	20.5	162.0	4.5	90.5
Singapore	91.6	111.8	54.2	53.3
Spain	22.6	52.5	8.3	126.2
Sweden	42.6	120.2	7.6	89.8
Switzerland	70.1	202.0	29.6	223.8
United Kingdom	87.0	158.0	28.6	92.4
United States	55.1	142.8	31.5	166.0
Europe EMU	**22.4**	**NA**	**7.5**	**NA**
World	**51.8**	**81.6**	**29.0**	**79.3**

Note: [a] Computed together using IFC Emerging Market Index

Source: World Bank, "World Development Indicators 2000."

Table 4: Worldwide Securities Issues, 1990-1999

This table details the total value, in billions of U.S. dollars, and number (in parentheses) of securities issues worldwide (including the United States) for selected years in the period 1990-99. The data are taken from early-January issues of the *Investment Dealers' Digest*.

Type of Security Issue	**1999**	**1998**	**1997**	**1996**	**1995**	**1993**	**1990**
Worldwide offerings (debt & equity)	$3,288 (21,724)	$2,884 (20,622)	$1,816 (15,669)	$1,443 (11,891)	$1,066 (9,305)	$1,503 (9,969)	$504 (7,574)
International debt	1,394 (6,758)	987 (4,682)	635 (4,066)	547 (3,172)	385 (2,548)	479 (2,701)	184 (1,376)
Eurobonds	1,041 (3,683)	641 (2,756)	475 (2,804)	432 (2,388)	280 (1,840)	388 (2,162)	172 (1,213)
Yankee bonds	302 (2,706)	273 (2,202)	150 (1,177)	90 (535)	45 (237)	59 (270)	13 (81)
International common Stock [a]	139 (817)	84 (674)	34 (302)	28 (305)	21 (242)	19 (309)	7 (132)
U.S. Issuers worldwide[b]	2,103 (17,115)	2,134 (17,091)	1,196 (11,644)	903 (8,660)	700 (6,807)	1,049 (7,378)	313 (6,141)
Domestic capital-raising issues	1,578 (15,050)	1,533 (14,763)	892 (10,768)	684 (7,718)	529 (5,930)	542 (5,562)	171 (1,586)
Investment grade debt	1,196 (12,285)	1,122 (11,602)	726 (9,098)	511 (5,808)	417 (4,562)	386 (3,637)	109 (1,016)
Collateralized securities	559 (2,790)	663 (3,205)	378 (1,557)	249 (1,097)	155 (709)	475 (1,285)	175 (4,542)
Common stock[c]	177 (1,091)	122 (1,042)	119 (1,341)	115 (1,607)	82 (1,159)	86 (1,374)	14 (362)
Initial public offerings[c]	71 (571)	44 (396)	44 (625)	50 (872)	30 (572)	41 (707)	5 (174)

Note: [a] Capital-raising private-sector offers; does not include privatization issues.
[b] From 1998, all figures include Rule 144A offers on U.S. markets.
[c] Excludes closed-end funds.

Figure 1: Total Value of Announced U.S. Mergers and Acquisitions, 1990-1999

This figure details the growth in the total value of announced mergers and acquisitions in the United States over the period 1990-1999. Data are the value of targets, expressed in $US billions, and are from Thomson Financial Securities Data as presented in the *Investment Dealers' Digest*, January 17, 2000, pg. 22.

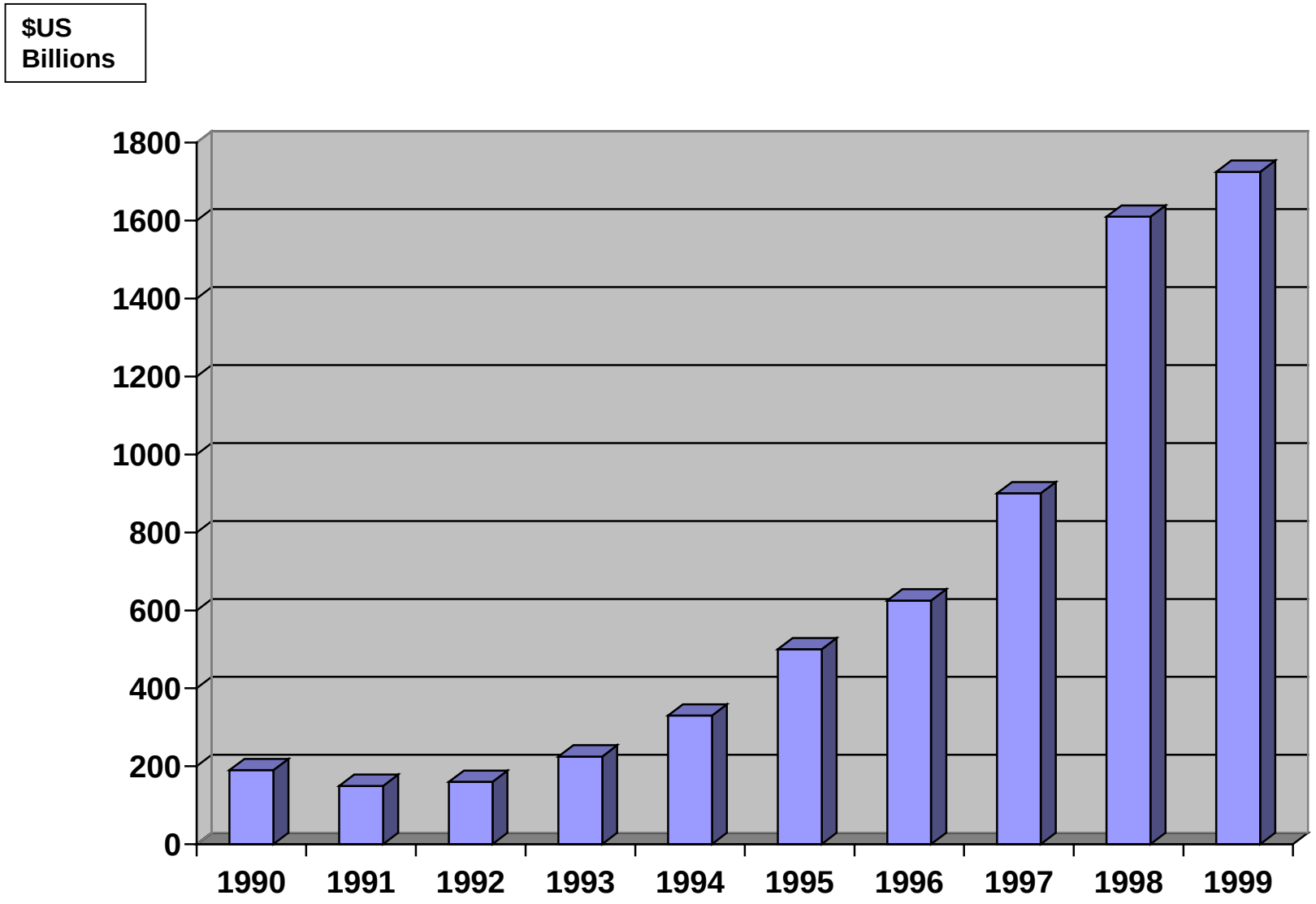
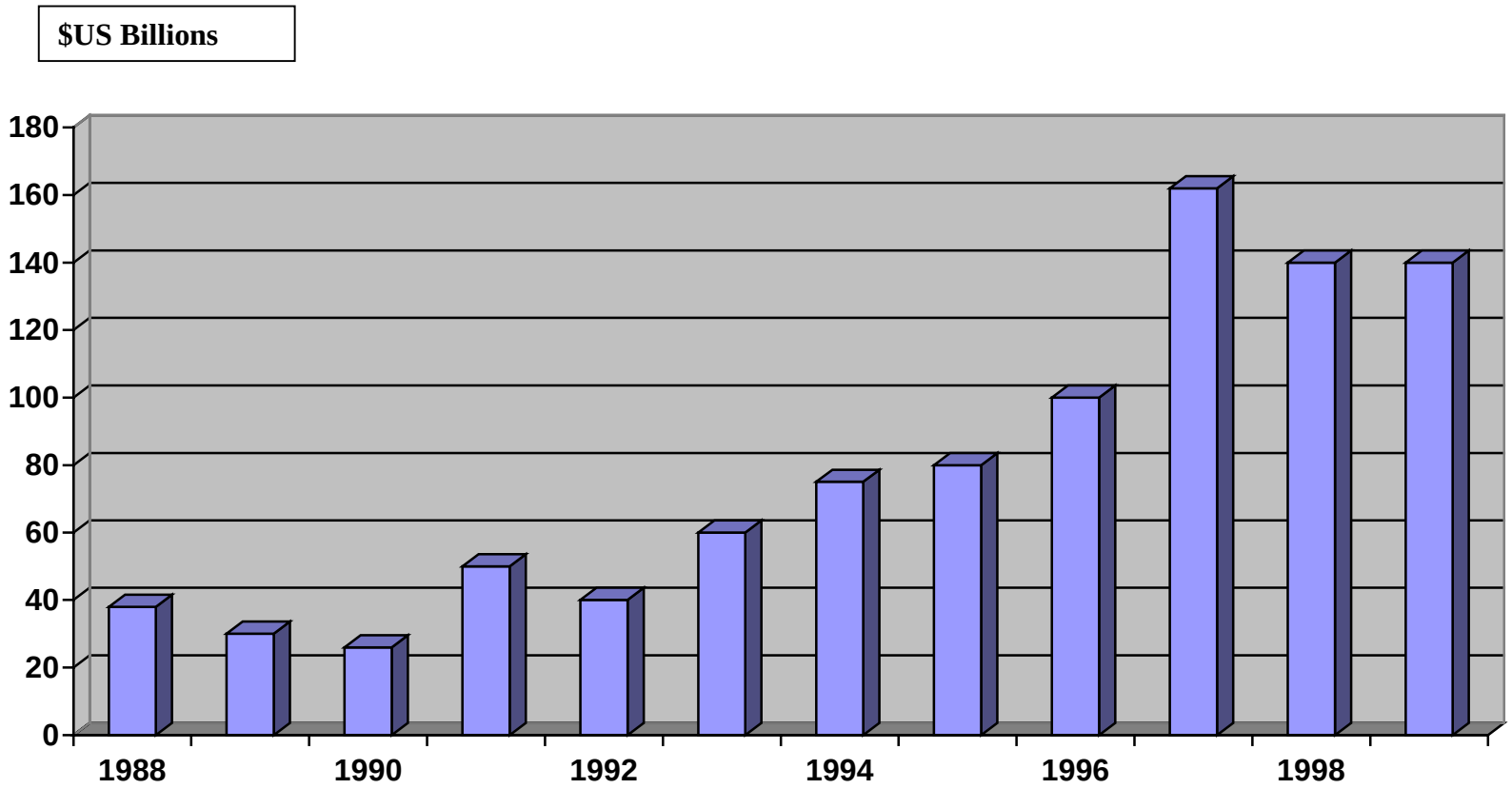


Figure 2: Annual Privatization Revenues For Divesting Governments, 1988-1999



Source: ***Privatisation International***, as reported in Gibbon (1998, 2000).

Table 5: Market Value, Sales, and Profits of the Largest, Publicly-Traded Privatized Firms

This table details the stock market value, total sales, and total profits--in millions of US dollars (translated at the contemporaneous exchange rate)--of the 30 publicly-traded privatized firms worth at least US $18 billion as of May 31, 1999. Data are from Morgan Stanley Capital International, as reported in "The Business Week Global 1000," *Business Week* (July 12, 1999). Global 1000 Rank refers to the company's global ranking based on market valuation, while Country Rank refers to the company's relative position among those firms from their country on the Global 1000 List.

Company Name	Country	Global 1000 Rank	Country Rank	Market Value US $mil	Market Value as % of Total National Mkt Capitalization
BP Amoco	United Kingdom	10	1	173,870	7.30
Nippon Telegraph & Telephone	Japan	13	1	156,770	6.43
Deutsche Telekom	Germany	23	1	115,023	10.51
British Telecommunications	United Kingdom	26	2	107,142	4.51
NTT DoCoMo	Japan	27	2	106,140	4.35
France Telecom	France	43	1	79,925	8.15
Telecom Italia	Italy	58	1	66,446	11.76
Telstra	Australia	62	1	63,890	19.40
Telefonica	Spain	80	1	51,150	14.75
ING Groep	Netherlands	81	2	50,763	8.43
ENI	Italy	83	2	50,483	8.94
TIM (Telecom Italia Mobiliare)	Italy	95	3	43,839	7.76
Elf Acquitaine	France	106	5	39,340	4.01
Telefonos de Mexico	Mexico	126 [a]	1	33,305	36.30
Total Fina	France	141	8	30,199	3.08
Cable & Wireless	United Kingdom	145	14	29,593	1.25
VEBA	Germany	154	9	28,629	2.62
Hong Kong Telecommunicatns	Hong Kong	164	2	27,600	8.03
Swisscom	Switzerland	170	8	26,659	3.87
Volkswagen	Germany	173	11	26,276	2.40
Singapore Telecommunications	Singapore	187	1	25,446	15.80
China Telecom	China	182 [a]	1	25,294	7.36 [b]
Gazprom	Russia	191 [a]	1	24,502	----
National Australia Bank	Australia	190	3	24,287	7.38
Unicredito Italiano	Italy	194	5	23,255	4.12
Koninklijke KPN	Netherlands	201	7	22,711	3.77
East Japan Railways	Japan	215	18	21,676	0.89
Endesa	Spain	230	4	20,432	5.89
Japan Tobacco	Japan	235	21	20,034	0.82
Korea Electric Power	Korea	241 [a]	1	19,752	17.23
San Paolo-IMI	Italy	251	6	19,129	3.39
NTT Data	Japan	255	25	18.908	0.77
Societe Generale	France	261	14	18,734	1.91
Banque Nationale de Paris	France	264	15	18,580	1.90
Paribas	France	279	16	17,880	1.82
Rhone-Poulenc	France	281	17	17,476	1.78
Repsol	Spain	305	5	16,256	4.69
Commonwealth Bank	Australia	317	5	15,253	4.63

[a] These firms are from a companion "Top 200 Emerging-Market Companies" ranking in the same *Business Week* issue, and they are given the rankings they would have if this list was included in the Global 1000 List.

[b] Expressed as a percentage of the Hong Kong market's total capitalization.

Table 6: How Many of a Nation's Most Valuable Firms are Privatized Companies?

This table details the relative size, measured by market valuation, of privatized firms in 44 national stock markets. Information is from Morgan Stanley Capital International, as reported in "The Business Week Global 1000," *Business Week* (July 12, 1999). Note that this is a biased (low) estimate, since many countries only had a small number of firms valuable enough to make the Business Week rankings, which implies that privatized firms probably would have occupied an even larger number of positions if a full ten companies had been listed for every country. The number of firms in the list from each country is given in parentheses.

Country	**Largest Firm**	**Second Largest**	**Third Largest**	**Fourth Largest**	**Fifth Largest**	**Sixth Largest**	**Seventh Largest**	**Eight Largest**	**Ninth Largest**	**Tenth Largest**
Australia (17)	x		x		x					
Austria (2)		x								
Belgium (13)										
Britain (108)	x	x								
Canada (25)										
Denmark (5)	x									
Finland (6)		x				x				
France (45)	x				x			x		
Germany (36)	x								x	
Hong Kong (15)		x								
Ireland (5)			x							
Italy (23)	x	x	x		x	x			x	
Japan (135)	x	x								
Netherlands (22)		x					x			
New Zealand (1)	x									
Norway (1)										
Portugal (3)	x	x	x							
Singapore (8)	x	x								
Spain (10)	x			x	x		x	x		
Sweden (16)								x		
Switzerland (20)								x		
Top 200 Emerging Market Firms										
Mexico (18)	x								x	
China (1)	x									
Russia (4)	x	x	x	x						
Taiwan (32)	x			x				x	x	x
Korea (18)	x	x		x	x					x
South Africa (19)										x
Argentina (6)	x	x	x							

Brazil (20)	x		x	x	x		x			x
India (7)				x	x		x			
Greece (10)	x	x							x	
Malaysia (10)	x	x		x						
Poland (1)	x									
Thailand (7)						x	x			
Hungary (2)	x	x								
Czech Republic (1)	x									
Turkey (6)	x									
Chile (7)	x		x	x		x				
Indonesia (5)	x			x						
Philippines (8)							x			
Venezuela (1)	x									
Israel (6)		x		x	x	x				
Jordan (1)										
Pakistan (1)	x									

Table 7: The World's Largest Share Offerings Are All Privatizations

This table presents offering details for the 39 largest share offerings in history (those raising at least $4.5 billion) as of the end of 1999. The 25 largest (and 35 of the total) issues are offerings of shares in privatized firms. Offers are reported in nominal amounts (not inflation-adjusted), and are translated into millions of US dollars ($mil) using the current exchange rate. *Private-sector offerings* are presented in italicized type, while share issue privatizations (SIPs) are presented in normal typeface. An initial public offering is indicated as an IPO, while a seasoned equity offers is designated an SEO. Amounts reported for SIP offers are as described in the *Financial Times* at the time of the issue. Private firm offer amounts are as reported in the *Securities Data Corporation* file.

Date	Company	Country	Amount ($mil)	IPO/SEO
Nov 87	Nippon Telegraph & Telephone	Japan	$40,260	SEO
Oct 88	Nippon Telegraph & Telephone	Japan	22,400	SEO
Nov 99	ENEL	Italy	18,900	IPO
Oct 98	NTT DoCoMo	Japan	18,000	IPO
Oct 97	Telecom Italia	Italy	15,500	SEO
Feb 87	Nippon Telegraph & Telephone	Japan	15,097	IPO
Nov 99	Nippon Telegraph & Telephone	Japan	15,000	SEO
Nov 96	Deutsche Telekom	Germany	13,300	IPO
Oct 87	British Petroleum	United Kingdom	12,430	SEO
Nov 98	France Telecom	France	10,500	SEO
Nov 97	Telstra	Australia	10,530	IPO
Oct 99	Telstra	Australia	10,400	SEO
Jun 99	Deutsche Telekom	Germany	10,200	SEO
Dec 90	Regional Electricity Companies[a]	United Kingdom	9,995	IPO
Dec 91	British Telecom	United Kingdom	9,927	SEO
Dec 89	U.K. Water Authorities[a]	United Kingdom	8,679	IPO
Dec 86	British Gas	United Kingdom	8,012	IPO
Jun 98	Endesa	Spain	8,000	SEO
Jul 97	ENI	Italy	7,800	SEO
Jul 93	British Telecom	U.K.	7,360	SEO
Oct 93	Japan Railroad East	Japan	7,312	IPO
Dec 98	Nippon Telegraph & Telephone	Japan	7,300	SEO
Oct 97	France Telecom	France	7,080	IPO
Jul 99	Credit Lyonnais	France	6,960	IPO
Feb 94	Elf Acquitaine	France	6,823	SEO
Jun 97	*Halifax Building Society*	*United Kingdom*	*6,813*	*IPO*
Jun 98	ENI	Italy	6,740	SEO
May 94	*Autoliv Sverige*	*Sweden*	*5,818*	*IPO*
Oct 96	ENI	Italy	5,864	SEO
Oct 98	Swisscom	Switzerland	5,600	IPO
Jul 99	Repsol[b]	Spain	5,500	SEO
Nov 99	*United Parcel Service*	*USA*	*5,500*	*IPO*
Oct 93	Banque Nationale de Paris	France	4,920	IPO
Nov 84	British Telecom	U.K.	4,763	IPO
Jun 97	*Norwich Union*	*United Kingdom*	*4,722*	*IPO*
Dec 87	Japan Air Lines	Japan	4,645	IPO
Dec 88	British Steel	U.K.	4,645	IPO
Dec 98	Banca Nazionale de Lavoro	Italy	4,600	IPO
Oct 97	Endesa	Spain	4,500	SEO

[a] Indicates a group offering of multiple companies that trade separately after the IPO.
[b] At the time of this offering, the Spanish government no longer owned shares in Repsol.

Table 8: Pricing, Share Allocation, and Control Allocation Patterns in Share Issue Privatizations

This table provides summary statistics on pricing, share allocation, and control allocation patterns for a sample of 630 share issue privatizations (SIPs) executed by 59 national governments during the period 1977-1997. Measures are broken down for the 417 initial public offerings of SIP shares and the 213 seasoned SIP offerings. **Pricing variables** include *Initial return* (also known as initial underpricing), which is a measure of one-day return an investor who purchased shares at the offering price could earn by reselling those shares at the end of the first day's trading; *Percent of offers at a fixed price*, which measures the fraction of an issue offered to investors at a pre-determined, fixed price rather than at an auction-determined price; and *Cost of sales as a percent of issue size* is a measure of the sum of cash expenses and underwriter discount charged by the investment banking syndicate managing the issue. The **Share allocation variables** measure the fraction of an issue specifically allocated to employees and foreigners, while the **Control allocation variables** describe how corporate control is parceled out as a result of the offering. *Percent of capital sold* measures the fraction of a firm's total common equity (which is not necessarily synonymous with total voting rights) sold in an offering.

	Initial SIPS			Seasoned Offers		
Measure	**Mean**	**Median**	**Number**	**Mean**	**Median**	**Number**
Pricing Variables						
Issue size (US$ million)	555.7	104.0	417	1,068.9	311.0	172
Initial return	34.1	12.4	242	9.4	3.3	55
Percent of offer at fixed price	85.0	100.0	273	61.0	100.0	77
Cost of sales as a percent of issue	4.4	3.3	178	2.5	2.6	61
Share Allocation Variables						
Percent of offer allocated to employees	8.5	7.0	255	4.8	2.6	76
Fraction of offers with some allocation to employees	91.0		255	65.8		76
Percent of offer allocated to foreigners	28.4	11.5	348	35.9	32.5	142
Percent of offers with some allocation to foreigners	57.1		348	67.6		142
Control Allocation Variables						
Percent of capital sold in offer	43.9	35.0	384	22.7	18.1	154
Percent of offers where 100% of capital sold	11.5		384	0		154
Percent of capital where 50% or more of capital sold	28.9		384	8.4		154

Source: Jones, et al (1999).

Table 9: Holding Period Returns for Privatization Initial Public Offerings Over One, Three and Five Year Periods

The share issue privatization (SIP) holding period return (HPR) represents a buy-and-hold return with dividends reinvested in the respective security and is calculated using the Datastream return index (RI) datatype. The SIP return uses the first available (base date) post-issue closing price from Datastream, so the initial returns are not reflected. For the country (local currency) tests, SIPs are matched to a national stock market return index. The world index test compares the local currency return on the SIP issues with the local currency return on an investment in the *Financial Times* World Index (currency adjustment not shown). The S&P index test compares the HPR on the SIP issues with the currency-adjusted return of the S&P 500 index. The Wilcoxon (Z) statistic identifies the differences in median values between the groups. The mean t-statistic tests whether the HPR for the SIP minus the HPR for the firm or index (the net return) is significantly greater than 0. The one-year results are for 158 firms, three year results are for 117 firms, and five year results are for 65 firms.

	(1) SIP	(2) Matching Samples			(3)			(4)			(5)		
		Country			World			S&P 500			Industry		
	HPR	HPR	Diff.	Test Stat.	HPR	Diff.	Test Stat.	HPR	Diff.	Test Stat.	HPR	Diff.	Test Stat.
One-year													
mean	.2507	.1323	.1184	3.298[a]	.1311	.1196	3.038[a]	.1763	.0744	1.834[c]	.1504	.1002	2.087[b]
median	.1800	.1185	.0366	2.616[a]	.1192	.0368	2.354[b]	.1955	.0289	1.196	.0493	.0819	2.467[b]
Three-year													
mean	.8110	.4921	.3189	2.989[a]	.5274	.2836	2.644[a]	.7209	.0900	.818	.6551	.1558	1.083
median	.4580	.4605	.0730	1.738[c]	.4148	.1358	1.746[c]	.5646	.0002	.068	.3420	.0907	1.353
Five-year													
mean	1.765	.8545	.9108	4.780[a]	.8680	.8972	4.291[a]	1.199	.5665	2.223[b]	2.166	-.400	-.3100
median	1.267	.8289	.4692	4.156[a]	.6186	.5012	4.026[a]	.9419	.1997	2.725[a]	.6285	.6283	3.248[a]

a significant at the 1% level
b significant at the 5% level
c significant at the 10% level

Source: Megginson, Nash, Netter and Schwartz (2000).

Table 10: Share Ownership in Privatized and Non-Privatized Firms in Developed Countries

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Columns 3 and 4 in this table detail the share ownership and total market capitalization of 86 privatized firms in developed market economies, and compares these values to those of a matched sample of private-sector (non-privatized) companies with the most similar total market capitalization. Market capitalization data is from Morgan Stanley Capital International, as reported in "The Business Week Global 1000," *Business Week* (July 12, 1999). The number of stockholders is primarily from the June 1999 *Worldscope Disclosure* database. Columns 4 and 5 show the number of institutional shareholders and the respective percentage held by them, compared to the same values for the matched non-privatized companies, the data are form the *Bloomberg Investment Services* as of March 2000.

Country	Privatized Firm Name	Total Market Capitaliza-tion, $US million	Number of Share-holders	Number of institut-ional holders	% institut-ional holdings	Matching Non-Privatized Firm Name	Total Market Capitaliza-tion, $US million	Number of Share-holders	Number of institut-ional holders	% institut-ional holdings
Australia	Telstra	$63,890	1,413,504	245	4.60	News Corporation	$29,602	26,297	221	6.25
	National Australia Bank	24,287	253,457	297	9.15	Broken Hill Proprietary	17,396	311,000	288	11.40
	Commonwealth Bank	17,396	415,165	152	5.25	Westpac Banking	12,970	172,617	240	12.78
Austria	Verbund Oesterreichische	4,045	unknown	68	4.39	Bank Austria	5,751		214	12.81
Britain (UK)	BP Amoco	173,870	515,790	618	7.02	Glaxo Wellcome	101,535	163,364	694	12.79
	British Telecommunications	107,142	2,039,977	578	11.75	HSBC Holdings	93,690	160,000	596	11.30
	Cable & Wireless	29,593	158,764	418	11.20	Abbey National	29,315	2,028,141	324	12.32
	BG (formerly British Gas)	21,743	1,230,604	489	8.41[a]	Reuters Group	19,704	24,395	345	12.48
	British Aerospace	11,648	77,200	387	17.63	Bass	11,754	85,926	274	12.98
	BAA (British Airports Auth)	11,380	445,948	227	9.58	J. Sainsbury	11,605	108,050	231	6.66
	Railtrack Group	10,406	278,461	261	17.46	Woolwich	10,496	1,216,932	182	4.76[a]
	Scottish Power	10,323	552,094	214	10.37	Allied Domecq	10,030	54,816	275	11.34[a]
	National Grid Group	10,023	840,367	218	13.50	Peninsular & Orient Steam	9,398		182	15.66
	National Power	9,652	844,203	265	16.99	Telewest Communications	9,201	7,638	98	4.03
	Scottish & Southern Energy	8,302		124	8.93	Reed International	8,319	37,554	263	12.07
	Centrica (ex British Gas)	8,102	1,294,471	178	10.11	Imperial Chemical Industries	8,025	204,349	221	11.75
	British Airways	7,562	229,329	317	17.73	Dixons Group	7,728		186	22.46
	Powergen	7,049	815,622	175	10.82	Scottish & Newcastle Brewer	7,204	41,515	175	12.43
	British Energy	6,434	237,623	152	17.34	Hilton Group	6,524	52,758	197	11.43
	Rolls-Royce	6,278	345,577	215	21.29	WPP Group	6,205	5,825	161	25.21
	Thames Water	5,549	209,772	234	15.68[a]	Daily Mail & General Trust	5,554	3,981	19	47.29
	Severn Trent	4,959	105,058	137	13.17	Carlton Communications	4,870	18,241	201	13.48
	Stagecoach Holdings	4,560	23,983	117	11.71	British Land	4,575	9,805	185	12.8
	British Steel	4,209	173,279	171	27.79	Williams plc	4,271		224	14.00[a]
Canada	Canadian National Railway	6,170		274	74.98[b]	Alcan Aluminum	6,292	20,000	376	69.62

	BCT.Telus Communications	5,668	152,621	93	19.23	Shell Canada	5,522	3,161	47	11.56
	Suncor Energy	4,105	1,740	152	58.12[b]	Newbridge Networks	5,019	1,286	253	42.29
	Alberta Energy	4,056	45,000	136	55.67[b]	Magna International	4,648	1,189	211	54.00
Denmark	Tele Danmark	11,034	40,000	204	10.54	Novo-Nordisk	7,691	28,030	94	n.a.
Finland	Sonera Group	14,193	74,413	167	4.16[a]	Stora Enso	7,698	58,723	39	3.39[a]
	Fortum	4,182	62,425	21	3.47[a]	Merita	4,833	400,000	131	15.66[a]
France	France Telecom	79,925	1,400,000	529	10.80	AXA	41,359	470,000	781	28.15
	Elf Acquitaine	39,340	unknown	691	30.74	Vivendi	39,699	250,010	699	31.96
	Total	30,199		630	23.57	Sanofi-Synthelabo	30,529	80,000	92	2.50[a]
	Societe Generale	18,734	400,000	573	31.33	LVMH Moet Hennessy	24,968	150,000	380	15.44
	Banque Nationale de Paris	18,582	unknown	535	19.17	Groupe Danone	21,503	140,000	520	25.60
	Paribas	17,879	400,000	468	32.95	Pinault-Printemps-Redoute	20,844		394	20.07
	Rhone-Poulenc	17,476		530	31.22[c]	L'Air Liquide	12,894	300,000	399	21.00
	STMicroelectronics	16,602		256	54.27	Promodes Group	12,597		284	14.02
	Compagnie de Saint-Gobain	14,510	350,000	515	29.81	Cap Gemini	10,324		419	25.08
	Credit Lyonnais	9,933	3,400,000	29	0.61[a]	Lafarge	9,642	168,000	380	29.49
	Aerospatiale Matra	9,500	2,500,000	43	0.42[a]	Groupe Castorama	9,346		200	14.99
	Renault	9,128	280,000	n.a.	7.19	Schneider Electric	9,307	130,000	421	32.88
	AGF (Assur General France)	9,067	171,500	231	11.36	Canal Plus	9,017	50,000	247	28.17
	Credit Commercial France	8,138	unknown	243	28.28	Accor	8,857	49,000	417	33.20
	Peugeot	7,516	unknown	356	25.81	Casino, Guichard-Perrachon	8,012	4,000	203	11.89
	Thomson-CSF	5,510	60,300	217	12.81	Sodexho Alliance	5,444	31,000	237	26.45
	TF1	4,892	100,000	135	26.98	Lagardere	4,791	114,576	142	9.98[a]
Germany	Deutsche Telekom	115,023	unknown	60	2.58[a]	DaimlerChrysler	86,874	1,400,000	1039	19.04
	VEBA	28,629	450,000	686	27.05	Bayer	28,408	295,000	647	27.27
	Volkswagen	26,276	728,000	559	27.09	Hoechst	26,145	330,000	356	15.73
	VIAG	12,043	60,000	326	14.30	Commerzbank	13,759	270,000	336	22.02
	Deutsche Lufthansa	7,991	490,000	35	0.83	Preussag	8,700	70,000	270	3.98
Hong Kong	Hong Kong Telecommunicat	27,604	17,740	321	6.48	Hutchison Whampoa	32,361	11,169	454	13.11
Ireland	Telecom Eireann	8,780	574,082	n.a.	n.a.	Bank of Ireland	9,605	34,497	209	16.06
Italy	Telecom Italia	66,446	2,060,000	748	25.98	Assicurazioni Generali	36,556	168,116	556	18.84
	ENI	50,483	600,000	612	13.99	Fiat Group	14,901	177,406	258	12.48
	TIM (Telec Italia Mobiliare)	43,839	37,546	497	16.63	Banca Intesa	14,342	35,213	194	9.04
	Unicredito Italiano	23,255	94,567	441	15.30	Mediaset	9,944	231,948	219	17.20
	San Paolo-IMI	19,129	50,831	305	4.41[a]	Olivetti	9,338	70,000	201	10.56
	Banca Commerciale Italiana	12,903	170,135	255	21.12	Con. e Cost. Autostrade SPA	8,721	6,000	14	1.10[a]
	Banca di Roma	7,789	22,086	77	3.49[a]	Alleanza Assicurazioni	8,717	41,537	85	1.93[a]
	Alitalia	4,659	39,937	29	0.38[a]	Montedison	4,891	99,196	184	17.26
Japan	Nippon Telegraph & Teleph	156,775	1,326,061	504	3.06	Toyota Motor	99,826	98,695	354	2.26
	NTT DoCoMo	106,142		289	14.92	Bank of Tokyo-Mitsubishi	61,805	57,717	397	2.63

	East Japan Railway	21,676	275,973	217	3.06	Bridgestone	21,580	17,963	368	7.09
	Japan Tobacco	20,034	99,399	154	2.41	Nomura Securities	19,743	190,508	370	7.27
	NTT Data	18,908	6,378	242	7.10	Industrial Bank of Japan	18,508	27,344	174	1.75
	Central Japan Railway	11,734	385,862	8	13.09[a]	Mitsubishi Trust & Banking	11,655	15,538	175	2.31
	West Japan Railway	8,161	250,726	69	1.90	Osaka Gas	8,212	209,726	144	2.92
	Japan Airlines	5,463	175,496	104	1.25	Eisai	5,476	24,225	167	8.34
Nether-lands	ING Groep	50,763	unknown	724	16.01	Aegon	47,866		457	8.41
	Koninklijke KPN	22,711	unknown	n.a.	n.a.	Koninklijke Ahold	22,008	300,000	376	28.69[a]
New Zealand	Telecom Corp of New Zeald	7,406	28,383	219	11.65	Carter Holt Harvey[d]			90	12.74
Portugal	Electricidade de Portugal	11,106	unknown	239	14.18	Sonae SGPS[d]			116	16.03
	Portugal Telecom	8,520	180,000	414	21.80					
	Banco Comercial Portugues	5,396	24,489	190	17.41	Telecel-Comunica[d]			204	24.79
Singapore	Singapore Telecommunicatn	25,446	391,897	231	12.57[a]	Development Bank of Singap	9,949	10,098	82	2.41
	Singapore Airlines	11,146	14,668	69	2.54	OCBC Overseas Chinese Bk	9,477	31,135	96	2.43
Spain	Telefonica	51,151		705	17.98	Banco Santander Central His	38,230	593,022	458	20.54
	Endesa	20,432	1,600,000	571	13.66	Banco Bilbao Vizcaya	30,138	425,205	43	0.28[a]
	Repsol	16,256		428	9.76	Iberdrola	13,257	unknown	381	18.59
	Gas Natural SDG	11,705	21,404	190	5.26	Banco Popular Espanol	7,988	84,137	297	17.05
	Argentaria	11,225	912,569	246	10.40	Union Electrica Fenosa	4,036	90,000	214	14.69
Sweden	Nordbanken Holding	7,774	101,980	11	8.50[a]	Foereningssparbanken	7,436	456,229	168	10.55
Switzer-land	Swisscom	26,659	44,969	273	5.15[a]	Swiss Re	27,571	41,305	407	9.95
			Mean	293	15.46			Mean	281	15.78
Subtotal	86 Global 1000 Companies	$2,026,179	Median	242	12.81			Median	231	12.79

[a] Data on institutional ownership and number of institutional shareholders not available in Bloombergs description company page, the holdings search function has been used and the institutions with positive holdings were counted

[b] Includes the share of the state

[c] Data for Aventis (Rhone-Polenc merger with Hoechst in Dec. 1999) with market capitalization of $38,029.89 million

[d] Companies not in the Business Week list, but with matching market capitalizations.

Table 11: Share Ownership in Privatized and Non-Privatized Firms in Emerging Markets

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This table details the share ownership and total market capitalization of 66 privatized firms in emerging market economies, and compares these values to those of a matched sample of private-sector (non-privatized) companies with the most similar total market capitalization. Market capitalization data is from Morgan Stanley Capital International, as reported in "The Business Week Global 1000," *Business Week* (July 12, 1999). The number of stockholders is primarily from the June 1999 *Worldscope Disclosure* database.

Country	Privatized Firm Name	Total Market Capitalization, $US million	Number of Shareholders	Matching Non-Privatized Firm Name	Total Market Capitalization, $US million	Number of Shareholders
Mexico	Telefonos de Mexico	33,305		Grupo Modelo	8,511	
China	China Telecom (HK)	25,294				
Russia	Gazprom	24,502				
Taiwan	Taiwan Semiconductor	21,627		Cathay Life Insurance	14,157	
Korea	Korea Electric Power	19,752	795,646	Samsung Electronics	12,050	107,058
Argentina	YPF	15,146		Perez Companc	5,085	
Korea	Korea Telecom	14,731		SK Telecom	7,369	4,099
Brazil	Petrobras	13,371	8,650	Electrobras	11,142	
Greece	Hellenic Telecom (OTE)	10,926	158,980	Alpha Credit Bank	6,724	58,524
Greece	National Bank of Greece	10,879	12,000	Panafon Hellenic Telecom	6,377	
Malaysia	Telekom Malaysia	8,722	16,359	Malayan Banking	5,434	30,088
Poland	Telekomunikacja Polska	8,503				
Korea	Pohang Iron & Steel	7,767	247,950	Hyundai Securities	2,920	36,228
Brazil	Telecomunicac de Sao Paulo	7,397	854,229	Banco Itau	6,091	65,331
Brazil	Vale do Rio Doce	7,048		Banco Bradesco	4,914	2,414,603
Argentina	Telefonica de Argentina	6,959	25,000	Banco de Galicia Y Buenos	2,149	
Russia	Lukoil Holding	6,378				
Brazil	Telesp Participacoes	6,231		Banco do Brasil	4,015	381,416
Hungary	MATAV	5,981	160,000			
Malaysia	Tenaga Nasional	5,929	62,143	Malaysian Internatl Shipping	2,809	6,985
Taiwan	China Steel	5,630		Asustek Computer	9,723	
Argentina	Telecom Argentina	5,602		Banco Rio de la Plata	1,737	
Czech Republ	SPT Telecom	5,552	58,000			
Taiwan	First Commercial Bank	5,455		China Develpmt Indust Bank	6,790	
Taiwan	Hua Nan Commercial Bank	5,279		Nan Ya Plastics	6,032	
Turkey	Turkiye is Bankasi	5,275		Tupras-Turkiye Petrol Rafin	4,871	
Chile	Telecomun de Chile (CTC)	5,042	20,000	COPEC	4,079	11,889
Brazil	Tele Norte Leste Participaco	4,731		Embratel Participacoes	3,979	

Indonesia	Telekomunikasi Indonesia	4,479		Gudang Garam	3,812	
Taiwan	Chang Hwa Commecl Bank	3,992				
Russia	Surgutneftegaz	3,958				
Malaysia	Petronas Gas	3,654	17,200	Sime Darby	2,602	23,658
Korea	Kookmin Bank	3,565	121,507	Hyundai Motor	2,739	23,291
South Africa	SASOL	3,515	14,577	Liberty Life Assoc of Africa	3,653	7,055
Peru	Telefonica del Peru	3,425				
Brazil	Cemig	3,420	130,000	Cervejaria Brahma	3,312	10,000
Mexico	Grupo Fin Banamex-Accival	3,401		FEMSA	3,626	
Venezuela	Nacional Telefon Venezuela	3,307				
Taiwan	Intl Commerl Bank of China	3,233	140,000	Inventec	3,242	
Israel	Bank Hapoalim	3,104	unknown	ECI Telecom	3,176	
Israel	Bezeq Israel Telecommunic	3,019		Teva Pharmaceutical Industri	3,025	16,446
India	State Bank of India	2,994	993,473	Wipro	4,377	
Chile	Endesa	2,975		Embotelladora Andina	2,440	1,712
India	Mahanagar Telephon Nigam	2,853		Reliance Industries	3,684	4,300,000
Brazil	Tele Centro sul Participacoe	2,846		Companhia Saneamento Basico Sao Paulo	2,135	
Thailand	PTT Exploration & Productn	2,672				
Brazil	Telesp Celular Participacoes	2,662		Aracruz Cellulose	2,062	4,030
Chile	Enersis	2,647	12,800	Embotelladora Andina	2,440	1,712
Brazil	Telesp Celular	2,633		Souza Cruz	1,927	6,000
Israel	Bank Leumi Le-Israel	2,596	10,000			
Pakistan	Pakistan Telecommunicatins	2,469	62,942			
Russia	Unified Energy System	2,462	377,453			
Hungary	MOL Magyar Olaj-es Gazip	2,433	122,827			
Korea	Housing & Commercial Bank	2,422		Hyundai Electronics Industri	2,649	17,714
Philippines	Manilla Electric	2,416	75,845	Bank of the Philipine Island	2,612	
Thailand	Thai Airways International	2,378				
Korea	Korea Exchange Bank	2,217	95,879	Cho Hung Bank	2,447	78,900
Turkey	Petrol Ofisi	2,195		Koc Holding	2,404	
Indonesia	Indonesn Satellite (Indosat)	2,122	5,200	Indah Kiat Pulp & Paper	2,454	
Greece	Hellenic Petroleum	2,110		Intracom	2,939	4,300
Mexico	Grupo Financiero Bancomer	2,110	unknown	Organizacion Soriana	2,300	
Chile	Chilectra	2,073	11,347	Banco Santander Chile	1,822	9,500
Taiwan	Mosel Vitelec	1,969		Compeq Mfg	2,119	

India	Videsh Sanchar Nigam	1,927		Infosys Technologies	2,433	9,526
Brazil	Eletropaulo Metropolitana	1,800		Unibanco	1,908	135,391
Korea	Dacom	1,750	19,250	SK Corp	1,862	33,412
Israel	Koor Industries	1,745				
Subtotal	**67 Emerging Market Cos**	**$410,562**				
Total	**All 153 Companies**	**$2,436,741**				

Figure 3: The Evolution of Share Ownership in Privatized Firms After Initial Offering

This figure represents the dynamics of share ownership of the privatized firms in Tables 10 and 11, where the number of shareholders in Year 0 is normalized to 1 and in subsequent years shows the change with respect to Year 0. The companies with less than 100,000 initial shareholders exhibit increasing numbers of shareholders, and the companies with more than 100,000, more than 250,000 and more than 500,000 initial shareholders exhibit strong declines that pull the whole sample to a significant decrease in the number of shareholders over the whole period.

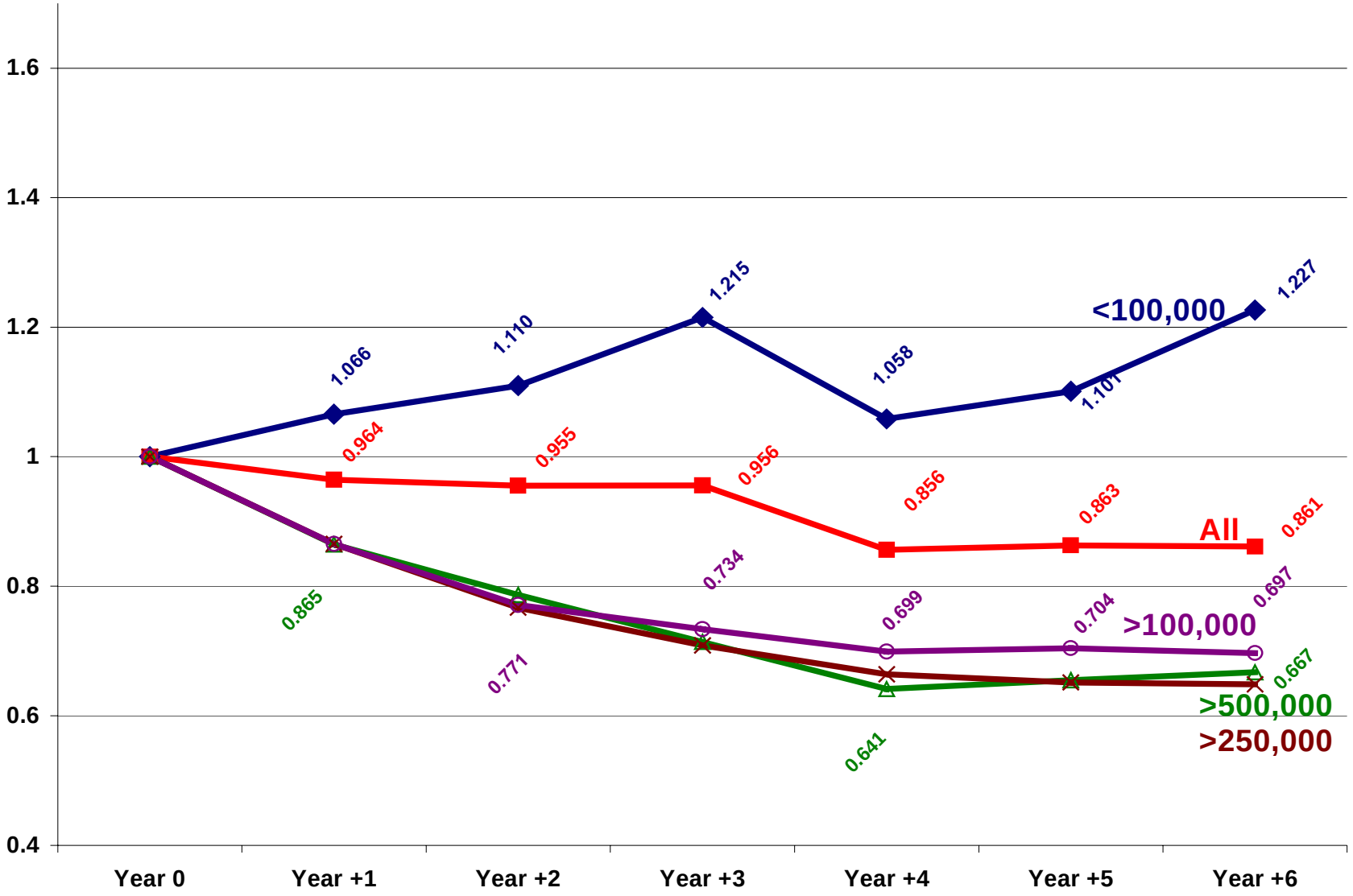
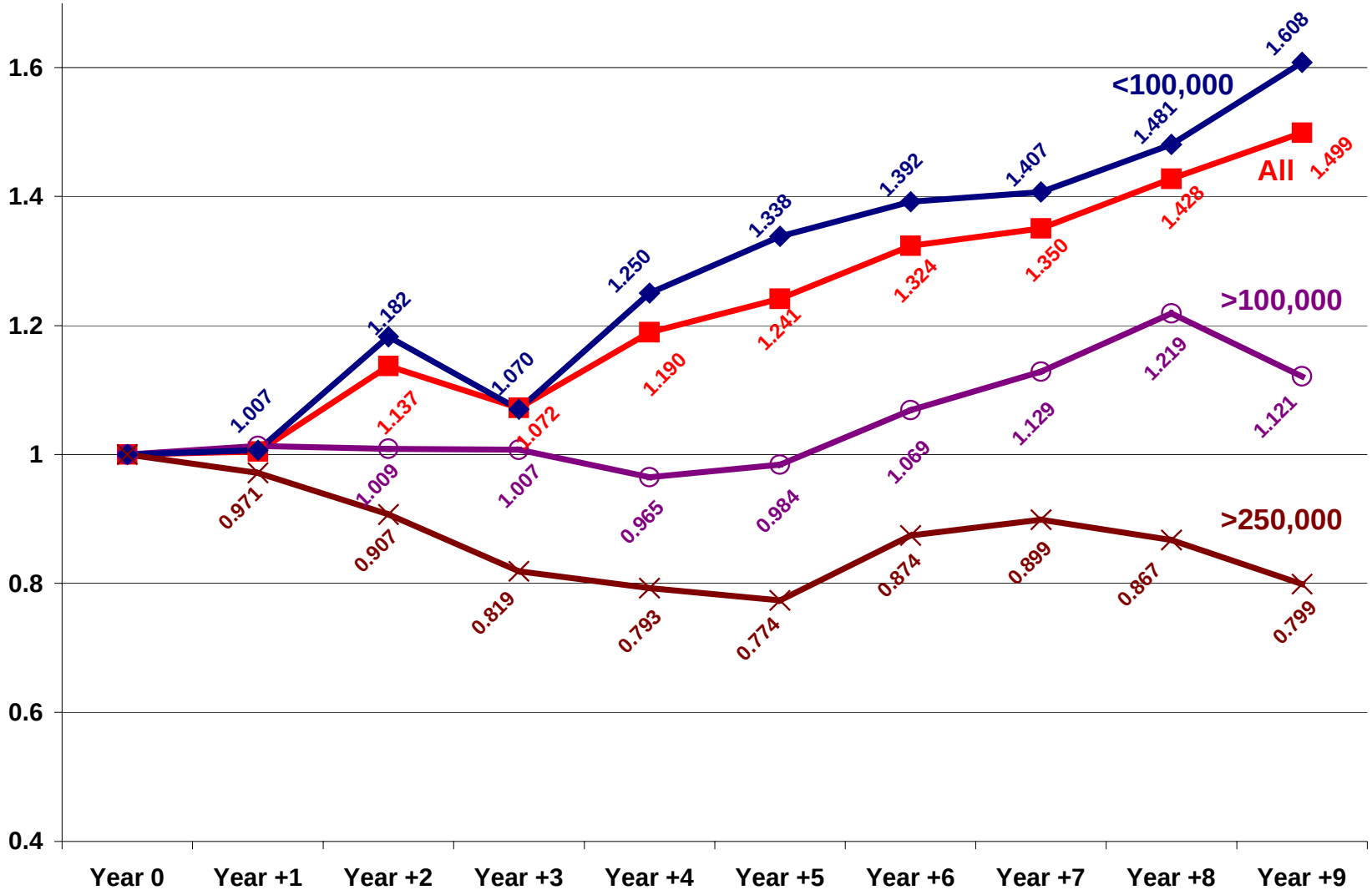


Figure 4: The Evolution of Share Ownership in Private-Sector (Non-Privatized) Firms Over Comparison Periods

This figure represents the dynamics of share ownership of the matching non-privatized companies over the 10-year period: 1989 - 1998. The shareholder base increases over the whole period and in Year 4 significantly so for all companies. For companies with more than 100,000 shareholders there is no significant increase in contrast to the same sub-group of the privatized companies sample.



Appendix 1: Changes in Share Ownership by Individuals in Years Following a Privatizing Share Offering

This table examines the evolution in individual share ownership in privatized firms during the years (up to seven) following a share issue privatization (SIP). The first column gives the company's name, while the second column details the date of issue and whether the offering was an initial public offering (IPO) or seasoned equity offering. Column 3 presents the number of individual shareholders owning stock in the company at the first post-issue reporting date, or 1989 (the earliest date with information available) if the initial offering date was prior to that time, while columns 4-9 report the number of shareholders owning stock in years +1 through +6 after the SIP. Source of shareholdings data: *Worldscope Disclosure* (June 1999 edition). Sources of offering data*: Privatisation International* and Appendix from authors' own research.

Company Name	**Offer Date & Type**	**# of S/H Year 0**	**# of S/H Year +1**	**# of S/H Year +2**	**# of S/H Year +3**	**# of S/H Year +4**	**# of S/H Year +5**	**# of S/H Year +6**
AUSTRALIA								
Commonwealth Bank	Jul 91 IPO	187,981	183,243					
Commonwealth Bank	Oct 93 SEO	274,355	275,204					
Commonwealth Bank	Jul 96 SEO	371,565	415,165					
Qantas	Jul 95 IPO	109,995	108,061	104,846	106,607			
CANADA								
Telus	Oct 90 IPO	59,973						
Telus	Nov 91 SEO	65,617	56,696	52,114	52,708	46,461	44,418	
Potash Corp Saskatch	Nov 89 IPO	1,845						
Potash Corp Saskatch	Oct 91 SEO	2,016	4,184 [a]	2,921	2,669	2,671	3,058 [a]	2,880
CHILE								
Enersis	1986 IPO	8,886	8,798	18,375	18,375[a]	15,874 [a]	14,550	13,857
CHINA								
Shanghai Vacuum Elect	Jan 92 IPO	35,349	123,207	123,207	113,009			
Guangzhou Shipyard	Jul 93 IPO	67,654	68,587	79,638	84,051			
Dongfang Electric	Jun 94 IPO	85,177	51,038	55,398				
Tianjin Bohai	Apr 94	33,225	65,824 [b]	66,226				
NE Electric Transmissn	Jul 95 IPO	74,036	77,027	136,854				
Yizheng Chemical Fibre	Apr 95 SEO	78,471	113,494	115,317				
DENMARK								
Tele Danmark	Apr 94 IPO	49,000	60,000	69,000	62,000			
FINLAND								
Valmet	Aug 88 IPO	9,000	8,886	8,839	8,751	5,661		
Valmet	Jun 94 SEO	5,422	4,784					
Valmet	May 96 SEO	12,268	11,056	9,998				
Rautaruuki	Jun 89 IPO	19,590	17,016	16,822	16,673			

Rautaruuki	Dec 93 SEO	17,624						
Rautaruuki	May 94 SEO	8,678	9,937	8,602	21,298 [a,b]	21,604		
Outokumpu	Aug 88 IPO	14,395						
Outokumpu	Jun 89 SEO	13,752	13,684	13,684				
Outokumpu	Dec 93 SEO	9,401						
Outokumpu	Jul 94 SEO	8,907	8,832	8,164	8,728	9,454		
Finnair	Feb 92 SEO	11,682	11,681	7,865				
Finnair	Jan 95 SEO	7,771	7,318	7,224	6,599			
Kemira	Nov 94 IPO	3,549	3,511					
Kemira	Oct 96 SEO	15,424	15,419	13,659				
FRANCE								
St. Gobain	Nov 86 IPO	750,000[c]	700,000	600,000	500,000	400,000	350,000	350,000
Paribas	Jan 87 IPO	1,000,000[c]	800,000	600,000	580,000	520,000	350,000	
Societe Generale	Jun 87 IPO	700,000	600,000	500,000	480,000	450,000	--	400,000
Union Assurance Paris	Apr 94 IPO	1,586,000	1,431,000	1,165,000				
Usinor Sacilor	Jul 95 IPO	400,000	--	210,000				
France Telecom	Oct 97 IPO	3,900,000	1,400,000d					
GERMANY								
VEBA	Mar 87 SEO	543,000[c]	--	--	--	405,000	405,000	405,000
HUNGARY								
MOL	Nov 95 IPO	28,796	30,316					
MOL	May 97 SEO	30,284						
MOL	Mar 98 SEO	122,827						
IRELAND								
Greencore	Apr 91 IPO	--	--	--	6,972	6,981	8,152	9,626
ITALY								
Banca Commrcl Italian	Aug 85 IPO	34,000	34,000	34,062	36,000	36,057		
Banca Commrcl Italian	Feb 94 SEO	39,466	--					
Banca Commrcl Italian	Mar 96 SEO	252,554	170,135					
Banco di Napoli	Nov 91 SEO	15,632	15,527	14,558				
Unicredito Italiano	Nov 91 SEO	38,431	36,674	35,492				
Unicredito Italiano	Dec 93 SEO	56,737	--					
Unicredito Italiano	Mar 96 SEO	171,514	94,567					
Sao Paolo-IMI	Mar 92 IPO	62,381	69,852	71,703	--	62,937	50,831	
IMI	Jul 96 SEO	204,000	251,122					
INA	Jun 96 SEO	298,785	207,157					
Alitalia	Dec 85 IPO	42,959	17,895	33,183	32,118	39,877	40,011	
Saipem	Jul 84 IPO	2,107	1,746	2,512	2,428	2,412	--	2,906

JAPAN								
Nippon Telegr & Telep	Oct 88 SEO	1,610,700	1,649,241	1,669,187	1,689,064	1,700,866	1,668,102	1,633,312
Japan Air Lines	Dec 87 IPO	159,940	169,607	157,889	198,836	207,538	211,834	209,134
East Japan Railway	Oct 93 IPO	672,501	526,370	418,255	355,280	275,973		
Japan Tobacco	Sep 94 IPO	134,142	118,344					
Japan Tobacco	Jun 96 SEO	135,823	99,399					
West Japan Railway	Oct 96 IPO	353,696	250,726					
KOREA								
Pohang Iron & Steel	Jun 88 IPO	838,200	743,652	651,112	538,807	392,512		
Pohang Iron & Steel	Oct 94 SEO	295,866	272,198	256,696	252,345	247,950		
Korea Electric Power	Jun 89 IPO	3,287,500	2,688,226	2,424,201	1,756,469	1,221,823		
Korea Electric Power	Oct 94 SEO	944,298	836,381	783,307	795,646			
MALAYSIA								
Malaysian Airlines	Oct 85 IPO	11,483	8,913	12,895	15,364	19,128		
Malaysian Airlines	Jan 94 SEO	21,626	13,786	10,421	13,540			
Telekom Malaysia	Oct 90 IPO	42,396	25,220					
Telekom Malaysia	Apr 92 SEO	15,869	12,231	11,217	9,816	9,683	9,560	16,359
Tenaga Nasional	Mar 92 IPO	185,010	100,374	79,705	78,760	65,567	53,287	62,143
Petronas Gas	Sep 95 IPO	34,274	28,897	17,200				
NEW ZEALAND								
Air New Zealand	Oct 89 IPO	26,282	26,055	23,913	24,182	23,936	23,580	23,555
Telecom New Zealand	Jul 91 IPO	33,037	30,678	30,422	31,034	33,711	33,058	28,383
NORWAY								
Christiana Bank	Dec 93 IPO	9,900	11,000	12,394	13,582	14,599	16,714	
PAKISTAN								
Pakistan Telecommun	Sep 94 IPO	--	--	63,952	62,942			
PHILIPPINES								
Philippine Nationl Bank	Dec 95 SEO	--	30,165	30,059				
PORTUGAL								
Banco Totta & Acores	Jul 90 SEO	--	--	--	30,139	28,905		
Banco Portug Atlantico	May 92 SEO	28,256						
Banco Portug Atlantico	Jul 93 SEO	30,000	39,809					
Banco Portug Atlantico	Mar 94 SEO	40,327						
SINGAPORE								
Neptune Orient Lines	Dec 87 SEO	24,020	27,851	27,831	28,054	31,222	29,729	31,747
Singapore Intl Airways	Jun 87 SEO	14,400	13,618	13,929	12,461	19,634b	18,208	16,258
Singapore Aerospace	Jun 90 IPO	--	--	24,679	20,112	19,011	18,621	17,545
Singapore Shipbuilding	Jul 90 IPO	--	13,255	13,642	6,965	6,398	6,347	6,842

Singapore Petroleum	Oct 90 IPO	--	--	6,685	6,580	5,935	5,859	6,332
Singapore Automotive	Sep 91 IPO	8,179	5,099	2,833	2,859	2,680	2,301	
Singap Technol Industrl	May 93 SEO	--	20,520	12,515	11,032	14,598		
Singapore Telecom	Oct 93 IPO	484,888	469,528	424,601				
Singapore Telecom	Jul 96 SEO	411,463	391,897					
SOUTH AFRICA								
ISCOR	Oct 89 IPO	255,823[c]	214,621	198,303	202,575	167,949	157,536	151,170
SPAIN								
Argentaria	Nov 93 SEO	540,666	511,663	473,056				
Argentaria	Mar 96 SEO	528,723	390,507					
Argentaria	Feb 98 SEO	912,569						
Gas Natural	Dec 96 SEO	16,510	21,369	21,404				
SWEDEN								
Svenskst Stal	Jun 92 SEO	20,397	21,291	20,956	50,730b	37,000 [a,b]	44,376	37,669
Pharmacia	Jun 94 SEO	--	35,631	36,327	36,914	36,809		
TURKEY								
Tofas Turk Otomobil	Mar 94 IPO	700	800	850	850			
UNITED KINGDOM								
British Petroleum	Oct 87 SEO	592,602	569,183	550,821	513,569	465,387	445,945	428,188
British Aerospace	May 85 SEO	91,700c	97,700	98,900	90,800	84,900	79,000	74,700
Cable & Wireless	Dec 85 SEO	166,179	160,754	160,141	158,481	163,450	175,484	170,670
Associated British Ports	Apr 84 SEO	--[c]	--	--	13,457	13,802	14,132	12,226
Enterprise Oil	Jun 84 IPO	10,200	10,811	10,659	9,794	9,644	9,445	
British Telecom	Nov 84 IPO	1,200,243	1,200,655	1,097,099				
British Telecom	Dec 91 SEO	2,691,038	2,297,697					
British Telecom	Jul 93 SEO	2,696,174	2,545,189	2,385,396	2,231,381	2,039,977		
BG plc (British Gas)	Dec 86 IPO	2,690,450	2,480,564	2,178,855	2,036,826	1,921,668	1,844,492	1,765,706
Centrica (British Gas)	1996 ECO[d]	1,335,645	1,294,471					
British Airways	Feb 87 IPO	338,350	314,039	295,970	265,819	252,016	242,805	241,454
BAA plc	Jul 87 IPO	889,067	798,643	713,403	602,728	561,959	525,822	523,405
Rolls Royce	May 87 IPO	738,659	640,055	594,335	564,318	517,462	453,215	422,537
British Steel	Dec 88 IPO	419,727	336,823	335,224	307,233	287,455	239,511	213,335
Anglian Water	Dec 89 IPO	112,000[e]	--	95,507	92,618	89,725	85,558	78,793
Thames Water	Dec 89 IPO	391,896	331,844	306,165	284,777	270,496	263,429	248,333
Yorkshire Water	Dec 89 IPO	100,386	80,695	74,639	72,134	67,101		
Severn Trent	Dec 89 IPO	182,136	144,705	136,649	133,130	132,350	131,862	125,221
Southern Electric	Dec 90 IPO	--	--	--	--	339,453	316,713	293,631
Scottish Power	May 91 IPO	--	--	--	---	610,410	603,864	552,094

National Power	Mar 91 IPO	1,042,640	767,313	654,904	600,160			
National Power	Mar 95 SEO	1,405,140	1,235,763	932,176				
Powergen	Mar 91 IPO	--	--	551,954	535,627			
Powergen	Mar 95 SEO	882,599	815,622					
British Energy	Jul 96 IPO	355,079	287,623					
AEA Technology	Sep 96 IPO	5,013	4,614					

Notes: [a] Worldscope documented a large increase in the number of shares outstanding, but unable to document if a share offering occurred.

[b] Worldscope documented a significant reduction in the number of closely held shares—indicating a government divestment, but unable to document a share offering using primary sources.

[a] Used 1990 data for initial year, rather than 1989.

[d] Formed by equity carve out from BG plc