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The Development of Institutional Investors

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Introduction

This chapter illustrates and analyzes the growth and development of institutional investors: pension funds, insurance companies, and mutual funds. It first provides an overview of the size and growth of institutional investors in the major Organization for Economic Cooperation and Development (OECD) countries. We then consider the differing features of various types of institution and the functions they fulfill in the financial sector, as well as their role in financial development. Using these sections as background, we seek to assess the main causes of growth for institutional sectors. We consider first the supply side: the improved ability of institutional investors to fulfill the various functions of the financial system. We then assess the demand side: the household sector's increased demand for the functions of the financial system that institutional investors fulfill. Both are considered to play an important role in the growth of institutional investment.

1.1 Size of Institutions and Financial Systems

This section provides data for the G-7 countries that illustrate the growth of institutional investors, drawn largely from **national flow-**

of-funds balance sheets. Summary averages are also provided for the G-7, the Anglo-Saxon countries (Canada, the United Kingdom, and the United States), and Europe and Japan (France, Germany, Italy, and Japan). Data are shown for the years 1970, 1980, 1990, 1995, 1997, and 1998. This format is retained for other tables in the rest of the book. The tables seek to offer a baseline set of information regarding the process of institutionalization over the past three decades. They provide an indication, first, of the actual scale of the changes over 1970–1998 and, second, of the degree to which they were apparent for the different countries. In practice, the broad directions of change are remarkably common, both for financial systems that are traditionally seen as bank dominated (Europe and Japan) and for those that are seen as market dominated (Anglo-Saxon), although institutionalization has gone farther in the latter than in the former.

Notes of caution should be sounded in using and interpreting national flow-of-funds data, as there is no guarantee of harmonization in terms of sectors, valuation methods etc. (See Davis, 1986, for a discussion of some of the more obvious discrepancies.) But they do allow a broad picture of developments to be drawn, particularly for one country over time.

1.1.1 Summary Ratios and Institutional Investment

As Goldsmith (1985) suggested, various summary ratios may be constructed showing the stage of financial development that has been attained by an economy (see also section 1.4). Typically, these use the aggregate of financial claims held or liabilities owed by the conventional sectors of the economy under the System of National Accounts: the household, corporate, public, banking, nonbank financial, foreign, and central banking sectors. These data are provided in the above-mentioned flow-of-funds balance sheets for the G-7 countries.

A first summary indicator of financial structure is the so-called **size indicator**, which shows the sum of claims or liabilities as a ratio to gross domestic product (GDP). The data show that the overall size of the financial superstructure has tended to grow sharply over time in all of the G-7 (table 1.1). Ratios of total financial assets to GDP have risen from around four times GDP in 1970 to eight times GDP in 1998. This illustrates the process of financial deepening that typi-

Table 1.1
Size Indicator of Financial Structure (Total Financial Claims as a Proportion of GDP)

	1970	1980	1990	1995	1997	1998	Change 1970–1998
United Kingdom	4.73	4.85	8.86	8.85	9.79	10.20	5.47
United Kingdom excluding Euromarkets	4.73	4.20	7.92	7.99	8.82	9.25	4.52
United States	4.05	4.06	5.91	6.80	7.64	8.59	4.53
Germany	2.89	3.58	4.69	5.28	6.10	6.58	3.69
Japan	3.79	5.06	8.53	8.28	8.46	8.85	5.06
Canada	4.67	5.06	5.78	6.48	6.94	7.34	2.67
France	4.41	4.78	6.92	7.29	8.60	9.19	4.78
Italy	3.35	3.93	4.27	4.84	5.33	5.59	2.23
G-7	3.99	4.38	6.29	6.71	7.41	7.91	3.93
Anglo-Saxon	4.48	4.44	6.54	7.09	7.80	8.39	3.91
Europe and Japan	3.61	4.34	6.10	6.43	7.12	7.55	3.94

Notes: G-7, Anglo-Saxon, and Europe and Japan summary figures are based on simple averages. Anglo-Saxon countries are the United States, the United Kingdom, and Canada; Europe and Japan comprise France, Germany, Italy, and Japan.

Sources: Drawn from national flow-of-funds balance sheet data. Source for the U.S.: Board of Governors of the Federal Reserve System (Flow of Funds Accounts for the United States); for the U.K.: Office of National Statistics (Financial Statistics); for Germany: Deutsche Bundesbank (Deutsche Bundesbank Monthly Review); for Japan: Bank of Japan (Bank of Japan Economic Statistics Monthly); for Canada: Statistics Canada (National Balance Sheet Tables); for France: Banque de France (Tableaux d'Opérations Financières); for Italy: Banca d'Italia (Statistical Supplement to the Monthly Bulletin). GDP data are from IMF (International Financial Statistics).

fies countries as they grow in terms of wealth and income, as has been the case both for the Anglo-Saxon countries and for Europe and Japan. The data indicate that growth of institutional investors has occurred in the context of rapid overall growth in financing in the economies of major industrial countries. One implication is that considerable growth in the absolute size of institutional investors could have taken place even if their share of overall financing had stayed constant.

There are some quite sizable differences in the overall scope of financing, with Germany and Italy in particular showing a lower ratio of financing to GDP. However, this may relate partly to measurement differences. An important point in relation to the United Kingdom is that the presence of an “offshore” international banking sector in the City of London tends to boost indicators of financing quite considerably; hence for comparability purposes, we prefer to

Table 1.2

Financial Intermediation Ratios (Intermediated Claims as a Proportion of the Total)

	1970	1980	1990	1995	1997	1998	Change 1970–1998
United Kingdom	0.32	0.42	0.47	0.58	0.58	0.58	0.26
United Kingdom excluding Euromarkets	0.32	0.34	0.40	0.54	0.53	0.54	0.22
United States	0.33	0.37	0.34	0.38	0.38	0.44	0.11
Germany	0.44	0.45	0.43	0.46	0.47	0.47	0.04
Japan	0.39	0.42	0.42	0.46	0.45	0.45	0.06
Canada	0.29	0.34	0.37	0.40	0.41	0.40	0.10
France	0.34	0.62	0.41	0.43	0.42	0.41	0.06
Italy	0.36	0.32	0.31	0.31	0.32	0.35	–0.01
G-7	0.35	0.41	0.38	0.43	0.43	0.44	0.08
Anglo-Saxon	0.31	0.35	0.37	0.44	0.44	0.46	0.14
Europe and Japan	0.38	0.45	0.39	0.42	0.41	0.42	0.04

Source: National flow-of-funds balance sheet data; for detailed sources, see table 1.1.

present the United Kingdom with and without foreign currency bank assets and liabilities (“euromarkets”).

A second ratio of interest is the **financial intermediation ratio**. This shows the proportion of the total of financial claims in an economy that are held by financial intermediaries such as banks and institutional investors instead of being nonintermediated or “direct” claims between nonfinancial sectors (such as household sector holdings of corporate equity or government bonds). The overall degree of financial intermediation has risen in most countries. In other words, direct claims of the nonfinancial sector on itself have tended to decline in importance relative to intermediated claims (table 1.2). Whereas in 1970 intermediation accounted for 35% of G-7 claims, by 1998 it was 44%. The process of financial deepening has thus been accompanied by an increase in the relative size of the financial sector. In 1998, the financial intermediary sector accounted for a larger proportion of total financing in the Anglo-Saxon countries than in Europe and Japan,¹ despite the fact that securities markets (which facilitate growth of direct claims) are also larger in the Anglo-Saxon countries.

The **institutional intermediation ratio** shows the extent to which institutional investors’ share of intermediation has also increased.

1. Data for Italy and France may, however, be distorted by a change in the treatment of items such as equity in noncorporate business in the 1980s.

Table 1.3

Bank and Institutional Intermediation Ratios (Proportion of Intermediated Claims Held by Banks and Institutional Investors)

		1970	1980	1990	1995	1997	1998	Change 1970–1998
United Kingdom	Bank	0.58	0.64	0.55	0.47	0.46	0.46	–0.12
	Institutional	0.28	0.26	0.32	0.38	0.39	0.40	0.12
United States	Bank	0.58	0.58	0.42	0.30	0.26	0.21	–0.37
	Institutional	0.31	0.31	0.40	0.48	0.52	0.46	0.15
Germany	Bank	0.84	0.86	0.83	0.78	0.75	0.74	–0.10
	Institutional	0.10	0.12	0.17	0.21	0.22	0.23	0.13
Japan	Bank	0.45	0.36	0.38	0.34	0.34	0.32	–0.12
	Institutional	0.10	0.10	0.16	0.19	0.19	0.19	0.09
Canada	Bank	0.45	0.55	0.44	0.49	0.46	0.42	–0.02
	Institutional	0.23	0.19	0.25	0.30	0.33	0.36	0.13
France	Bank	0.94	0.68	0.82	0.74	0.72	0.66	–0.28
	Institutional	0.05	0.04	0.19	0.24	0.26	0.29	0.24
Italy	Bank	0.98	0.98	0.95	0.91	0.91	0.92	–0.06
	Institutional	0.06	0.05	0.11	0.09	0.09	0.10	0.04
G-7	Bank	0.69	0.66	0.63	0.58	0.56	0.53	–0.15
	Institutional	0.16	0.15	0.23	0.27	0.29	0.29	0.13
Anglo-Saxon	Bank	0.53	0.59	0.47	0.42	0.39	0.36	–0.17
	Institutional	0.28	0.25	0.32	0.39	0.42	0.41	0.13
Europe and Japan	Bank	0.80	0.72	0.74	0.70	0.68	0.66	–0.14
	Institutional	0.08	0.08	0.16	0.18	0.19	0.20	0.13

Source: National flow-of-funds balance sheet data; for detailed sources, see table 1.1.

(The institutional sectors that are included in the flow-of-funds data are generally pension funds, insurance companies, and mutual funds.) The result is clear: The share of banks in financial intermediation has tended to decline, even in the traditionally bank-dominated economies (table 1.3). In contrast, the share of financial intermediation undertaken by institutional investors has risen sharply in each of the G-7 countries, albeit attaining a higher level in the Anglo-Saxon countries.² On average, the share of intermediation undertaken by institutional investors in 1998 was 29% in the G-7, 41% in the Anglo-Saxon countries, and 20% for Europe and Japan. But in each case, there is an increase of around 13 percentage points in their share of intermediated claims since 1970.

2. Note that the data do not sum to 1.0, as there are financial intermediaries other than banks and institutional investors.

Table 1.4

Institutional Investor Claims of the Household Sector as a Proportion of GDP

	1970	1980	1990	1995	1997	1998	Change 1970–1998
United Kingdom	0.42	0.37	1.02	1.62	1.85	1.99	1.57
United States	0.41	0.47	0.79	1.22	1.52	1.74	1.33
Germany	0.12	0.20	0.33	0.51	0.64	0.71	0.59
Japan	0.15	0.21	0.58	0.74	0.73	0.76	0.61
Canada	0.32	0.32	0.52	0.78	0.95	1.05	0.73
France	0.07	0.12	0.52	0.78	0.95	1.09	1.02
Italy	0.07	0.06	0.15	0.14	0.16	0.20	0.13
G-7	0.23	0.25	0.56	0.83	0.97	1.08	0.85
Anglo-Saxon	0.39	0.39	0.78	1.21	1.44	1.59	1.21
Europe and Japan	0.11	0.15	0.40	0.54	0.62	0.69	0.59

Source: National flow-of-funds balance sheet data; for detailed sources, see table 1.1.

The **size of institutional investors** has correspondingly risen relative to GDP much more than has that of banks. A rough estimate,³ based on the ratio of institutional assets held by the household sector to GDP, is shown in table 1.4. For the G-7 as a whole, the value of institutional claims held by the household sector has increased from the equivalent of 23% to 108% of GDP. The growth has been most dramatic in the Anglo-Saxon countries, where the size of institutional investors has risen from the equivalent of 39%⁴ to 159% of GDP. In Europe and Japan, growth has still been marked, from around 11% of GDP to 69%. The United States and the United Kingdom are shown to be in the vanguard of institutionalization, with ratios in 1998 being over 170% of GDP. Besides the long-term comparison with 1970, it is instructive to compare the size of the institutional investor sectors in 1990 with that in 1998. The growth even over this relatively short period is dramatic, with the G-7 average ratio rising from 56% to 107%, while the United States has seen institutional investments held on behalf of households grow from 79% of GDP to 174%.

Concerning **relative growth** of insurance companies, mutual funds, and pension funds (table 1.5), over the long term, pension funds have grown faster than the other types of institutional investor,

3. This measure underestimates the total size of the institutional sector, since their claims are also held by sectors other than households, including on behalf of other institutional investors.

4. According to Lakonishok et al. (1992a), the U.S. ratio in 1950 was 21%.

Table 1.5

Average Annual Growth of Institutional Sectors, 1990–1998 (Growth of Assets in Domestic Currency)

	Insurance Companies	Pension Funds	Mutual Funds
United Kingdom	16	11	18
United States	9	14	20
Germany	9	5	15
Japan	5	9	–2
Canada	7	11	31
France	19*	0*	8
Italy	9*	3*	40

*1990–1995 only.

Sources: OECD (1997), National flow-of-funds balance sheets, FEFSI.

reflecting growth in coverage and maturity of pension systems, as well as ongoing population aging (Davis 1995a). However, in recent years, it is mutual funds that have undergone the most rapid growth, partly reflecting their own growing importance as a repository of retirement funds. Over the period from 1990 to 1998, average growth of institutional assets in the G-7 has been 8–13%. Over 1990 to 1998, in the United States, mutual funds grew by 20%, pension funds by 14%, and life insurance companies by 9% (see table 1.5). Over the same period, U.K. mutual fund assets rose by 18% per annum, pension funds by 11%, and insurance companies by 16%. In this context, one may add that the growth in assets only partly reflects new inflows of funds to the sectors concerned. A significant proportion links rather to reinvestment of earnings and capital gains, net of withdrawals, and redemptions. Indeed, in many countries, pension contributions in recent years have been zero or even negative as a consequence of the overfunding of defined benefit pension funds that enabled sponsoring companies to take contribution holidays.

1.1.2 Estimates of the Size of Institutional Investors

We sought to derive an estimate of the **value of institutional assets** by simply summing data (largely from the flow of funds) at 1998 exchange rates (table 1.6). These data show that the value of pension funds in the G-7 at that date was \$9.5 trillion, mutual funds \$7.2 trillion, and life insurance \$7.2 trillion. The value of institutional assets for the G-7 at the end of 1998 is indicated to be \$24 trillion, of

Table 1.6
Institutional Investment, 1998

	Life Insurance		Pension Funds		Mutual Funds		Total	
	(\$ billion)	% of GDP	(\$ billion)	% of GDP	(\$ billion)	% of GDP	(\$ billion)	% of GDP
United Kingdom	1294	93	1163	83	284	20	2742	197
United States	2770	33	7110	84	5087	60	14,967	176
Germany	531	24	72	3	195	9	798	35
Japan	1666	39	688	16	372	9	2727	63
Canada	141	24	277	47	197	34	615	105
France	658	43	91	6	624	41	1373	90
Italy	151	12	77	6	436	35	664	54
G-7	7212		9479		7195		23,886	

Sources: National flow-of-funds balance sheets, FEFSl, Investment and Pensions Europe (1999a). Discrepancies with the estimates from table 1.4 result from (1) different sources and sectoral definitions for some data and (2) the inclusion of institutional assets in table 1.6 that are held by sectors other than households.

which \$15 trillion are accounted for by U.S. institutional investors.⁵ For comparison, we estimate, using the same data sources, that the value of the G-7 equity markets in 1998 were \$30 trillion, and the bond markets were \$25 trillion.

Other estimates confirm these impressions drawn from flow-of-funds balance sheets. According to OECD estimates (OECD 1997), total institutional assets of OECD countries (including non-G-7 countries) were 38% of GDP in 1981 (\$3.2 trillion), 90% in 1991 (\$16.3 trillion), and 106.5% in 1995 (\$24.3 trillion). It may be added that other institutional assets (charities, nonfinancial firms Treasury operations, etc.) were estimated at \$3.8 trillion for the G-7 in 1995.

Another estimate, by British Invisibles (1997), again concurs with the above orders of magnitude. They consider that total global funds under management in 1995 were \$22 trillion, with global pension funds being \$8.2 trillion, insurance companies \$7 trillion, mutual funds \$5.3 trillion, and private client funds \$1.5 trillion. Walter (1999) estimates that the total value of global institutional assets is \$30 trillion if one includes \$7.5 trillion in offshore client accounts. Intersec suggest that world pension assets were \$11 trillion in 1998 and projected them to be \$15 trillion in 2003. At this point, income from asset management would become the principal source of income of a wide range of financial institutions, including banks (see chapter 5). Overseas assets of institutions were \$1.5 trillion in 1998 and were expected to be \$2.5 trillion in 2003.

BIS (1998) show that total institutional assets for the G-10 countries in 1996 were over \$20 trillion and more than 100% of GDP on average. The respective volumes for each sector were \$6.3 trillion for life insurance, \$1.7 trillion for non-life insurance, \$5.3 trillion for mutual funds, and \$7.1 trillion for pension funds. As shown in table 1.7, the United States accounted for over 50% of the total, Japan for 14%, and the United Kingdom for 9%. In this context, the size of insurance companies tends to be larger in countries where the growth of pension funds has been less marked, thus indicating that individuals seek to raise saving via life insurance when the scope for pension saving is limited. The BIS also suggested that the low level of institutional development in Continental Europe indicated considerable scope for further growth there (see tables 1.3 and 1.4).

5. Discrepancies with the estimates from table 1.4 result from (1) different sources and sectoral definitions for some data and (2) the inclusion in table 1.6 of institutional assets that are held by sectors other than households.

Table 1.7
Institutional Investors, 1996 (Percent of Global Total)

	Life Insurers	Non-Life Insurers	Mutual Funds	Pension Funds	Total Identified
United States	35.9	47.0	66.8	67.1	55.7
Japan	26.8	16.0	7.9	6.2	13.8
Germany	7.6	12.9	2.5	0.9	4.4
France	7.1	7.9	10.0	0.0	5.5
Italy	0.9	2.4	2.4	0.6	1.3
United Kingdom	11.0	5.7	3.5	12.7	9.2
Canada	2.2	2.0	2.9	3.4	2.8
Spain	1.7	0.0	2.6	0.0	1.2
Netherlands	3.4	1.8	1.3	5.1	3.3
Switzerland	1.9	2.6	0.0	2.7	1.7
Sweden	1.5	1.7	0.0	1.3	1.1
Total of above	100.0	100.0	100.0	100.0	100.0

Source: BIS (1998).

1.2 Characteristics of Institutions and Their Role in the Financial Sector

Institutional investors may be **defined** as specialized financial institutions that manage savings collectively on behalf of small investors toward a specific objective in terms of acceptable risk, return maximization, and maturity of claims. In this section, we trace the essential characteristics of institutional investors, the functions that they fulfill, and their place in the pattern of financial development. This forms a background to the more detailed analysis later in this chapter of the reasons for their growth, as well as for the assessment in later chapters of the performance and industrial organization of institutional sectors and the effects of growing institutionalization on the wider economy.

1.2.1 General Features Common to All Institutional Investors

Institutional investors, in common with other financial institutions, provide a form of **risk pooling** for small investors, thus providing a better trade-off of risk and return than is generally possible via direct holdings. This entails, on the asset side, putting a premium on **diversification**, both by holding a spread of domestic securities (which may be both debt and equity) and by international investment.

Institutions also prefer **liquidity** and hence use large and liquid capital markets, trading standard or “commoditized” instruments, so as to be able to adjust holdings in pursuit of objectives in response to new information. Any holdings of illiquid assets such as property typically account for a relatively small share of the portfolio.

A backup for the approach to investment is the ability to absorb and process **information**, which is superior to that of individual investors in the capital market. On the other hand, unlike banks, institutional investors rely on public information rather than private, which links strongly to their desire for liquidity.

Most institutions have **matched assets and liabilities in terms of maturity**, unlike banks, which tends to minimize the risk of runs. Moreover, in many cases, they have **long-term liabilities**, facilitating the holding of high-risk and high-return instruments. There is, however, a question as to the stability of money market mutual funds, as, like banks, they offer redemption of liabilities at par.⁶

The **size** of institutions has a number of important implications. There may be **economies of scale**, which result in lower average costs for investors. These may arise from, inter alia, the ability to **transact in large volumes**, which typically leads to a lowering of commission charges. Investors share the costly services of expert investment managers and thereby save in advisory fees. Size also enables them to invest in **large indivisible investments** (although there is a tension with desire for diversification).

Considerable **countervailing power** also results from size, which may be used to reduce transactions costs and custodial fees. This countervailing power also gives rise to the ability to ensure fair treatment by capital market intermediaries on the one hand and, on the other, to give potential for improved control over companies in which they invest, thus reducing the incidence of adverse incentive problems.

Further characteristics arise from the process of **asset management**, a service involving management of an investment portfolio on behalf of a client. Such asset management may be undertaken by the institutional investor itself (internal management) or by a separate institution such as a specialist fund manager, a life insurer, or the

6. See section 5.3.6. Other types of open-end mutual fund may face attenuated difficulties of a similar kind, since whereas they guarantee that redemption may occur at end-of-day net asset value, cash receipts from securities sales take several days to arise.

asset management arm or subsidiary of an investment bank or commercial bank (external management). There is fierce competition for positions as asset managers among these many and varied financial institutions. As we discuss further in chapter 2, fund management can be broken down into two stages: asset allocation between broad asset categories and security selection of individual assets within those categories.

There are offsetting forces in the asset management relationship. On the one hand, it gives rise to an essentially **fiduciary** relationship to the ultimate investor, which often entails a degree of caution in the portfolio strategy and a desire to limit risks incurred. On the other hand, such delegation raises **principal-agent problems**, as unless the fund manager is perfectly monitored and/or a foolproof contract is drawn up, the fund manager may act in his or her own interests (e.g., in generating excessive commission income)—or, particularly in Europe and Japan, in the interests of related financial institutions—and contrary to those of the liability holders. However, the various means that are used (particularly in Anglo-Saxon countries) to counteract such problems mean that fund management gives rise in turn to a potential for **herding behavior**, as we discuss in chapter 5. This may arise notably from the desire of managers to show that they are of good quality, for example in the context of short mandates, owing to the pressures exerted by performance measurement, or fear of takeover (for life insurers or closed-end funds).

1.2.2 *The Main Types of Institutional Investor*

The discussion above should, of course, not be taken to imply that institutional investors are homogeneous. They differ generally in terms of the contractual relations between the owners of the assets and the asset managers, that is, the rules determining the distribution of risk and return, as well as in the definition of their liabilities. The main types of institutional investors that we cover in this book are pension funds, life insurance companies, and forms of mutual funds.⁷ The main differences stem from liabilities.

7. Note that we omit from consideration trading desks of financial institutions and corporate treasury operations. These tend to have smaller asset holdings, have less of a buy-and-hold strategy, are generally leveraged, and have different incentives. Arguably, such an omission is justified institutionally but not in terms of their effect on market dynamics (see chapter 5).

Pension funds collect, pool, and invest funds contributed by sponsors and beneficiaries to provide for the future pension entitlements of beneficiaries (Davis 1995a, 2000a). They thus provide means for individuals to accumulate saving over their working life so as to finance their consumption needs in retirement. Pension funds are typically sponsored by employers, such as companies, public corporations, or industry or trade groups, although personal pensions (generally contracts between individuals and life insurance companies) are also common. Pension funds may be internally or externally managed. In the Anglo-Saxon countries, they are generally organized in the form of a trust,⁸ while elsewhere, structures such as foundations or captive insurance companies are employed. Returns to members of pension plans backed by such funds may be purely dependent on the market (defined contribution funds) or may be overlaid by a guarantee of the rate of return by the sponsor (defined benefit funds). The latter have insurance features that are absent in the former (Bodie 1990b). These include guarantees with respect to replacement ratios (pensions as a proportion of income at retirement) subject to the risk of bankruptcy of the sponsor, as well as potential for risk sharing between older and younger beneficiaries.

Defined contribution plans have tended to grow in recent years as employers have sought to minimize the risk of their obligations while employees desired funds that are readily transferable between employers. For both defined benefit and defined contribution funds, the liability tends to be set in real terms, as the objective of asset management is to attain a high replacement ratio at retirement (pension as a proportion of final salary), which is itself determined by the growth rate of average earnings.

In assessing **insurance companies** as institutional investors, we focus throughout this book on life business and abstract from that to property and casualty insurance. The latter, while having significant financial assets to back potential claims,⁹ does not constitute a form

8. Trust law was originally a means of ensuring that endowments for widows and orphans were correctly managed. Trustees have fiduciary duties to hold the assets in trust for members, act impartially, keep accounts, check that funding is in place, and seek expert advice when necessary. Under common law, in doing so, they must "act in the best interests of the beneficiaries." Clark (2000a) assesses some of the difficulties and conflicts that arise in this form of organization, which may affect investment.

9. For example, in the United Kingdom, the assets of non-life insurers are comparable to those of mutual funds.

of household saving in the manner of life insurance, pension funds, and mutual funds. The characteristics of the property and casualty sector are highly uncertain cash flows that depend on major disasters and court cases as well as the law of large numbers. Their portfolios tend to include more short-term assets and also equities than do life insurers' portfolios.

Life insurance companies, like pension funds, are long-term institutional investors with a large share of tradable assets in their portfolios. They historically provided insurance for dependents against the risk of death at a given time in the future but are increasingly offering long-term saving vehicles for pensions, to repay loans for house purchase, and the like. Whereas life insurance companies' liabilities have traditionally tended to be nominal, that is, offering a guaranteed return that is fixed in money terms, an increasing proportion of policies are now "variable" and either lack such guarantees, or may have option features, with, for example, variable returns but a guaranteed floor. There are increasingly close links with pension funds and pension provision, as life companies offer annuities for guaranteeing pension benefits as well as guaranteed investment contracts (GICs) purchased by pension funds. They often also provide defined contribution pensions directly, they may act as external asset managers for pension funds or may offer insurance to defined benefit funds on behalf of small employers¹⁰.

In the case of (occupational) pension funds and life insurers, the pattern of investments (e.g., the bond/equity split) is driven by the preferences of the sponsors, where the latter are typically distinct from the ultimate beneficiaries of the assets in the household sector. Nevertheless, in doing so, they will take into account the nature of liabilities and regulations, which may in turn affect portfolio distributions.

Mutual funds are simply vehicles for the pooling of assets for investment purposes. In this context, they seek to offer an enhanced risk return profile and greater liquidity to individual investors by exploiting synergies from pooling assets of many individuals, economizing in particular on transactions costs and management costs while offering low minimum holdings. They hence differ from the long-term institutions by offering short-term liquidity on pools of

10. For a discussion of life insurers' investments see chapter 2, also Dickinson (1998) and Davis (2000c).

funds, albeit at rates that depend on current market prices, either via direct redemption of holdings (**open-end funds**) or via the ability to trade shares in the funds on exchanges (**closed-end funds**). End investors in mutual funds are residual claimants and bear all the risk. Managers' remuneration is typically linked to the value of assets under management.

Asset allocation of an individual fund is generally fixed by the prospectus, especially in the case of specialized funds that invest in a given class of assets (domestic equities, foreign bonds, etc.¹¹). The asset manager is thus responsible only for security selection. Accordingly, the size and asset allocation of the mutual fund sector largely reflect the asset preferences of households directly¹² as they choose between investing in different types of funds such as equity, bond, and money market funds. Note, however, that not all mutual funds are held by households; institutional holding of mutual funds is also sizable, especially as a means of accessing expert portfolio management in specialized fields (e.g., emerging market country funds). In the United States, 30% of mutual fund assets are held by other financial institutions, notably pension funds.

An important difference between open-end and closed-end funds is that open-end funds are obliged to sell and buy at current net asset value (i.e., the market value of the securities held less any debt, divided by the number of shares), while closed-end funds can and often do trade at a discount to net asset value. Ultimately, it is the threat of takeover that limits such discounts. Open-end funds have to sell securities to cope with redemptions and hence require much greater liquidity than closed-end funds. Money market mutual funds, by holding only liquid short-term money market assets, are able to offer redemption of holdings at par and hence provide payments facilities. They have been notably popular in the United States and France.¹³

11. There are also some balanced funds that hold a variety of assets at their discretion; these are notably popular in Continental European countries such as France (see table 3.13).

12. The existence of mutual funds may itself modify such preferences relative to a situation in which direct securities holdings are the only options, for example by reducing risk aversion.

13. As we discuss in chapter 5, fiscal incentives have been important underlying factors in France. In the United States, the initial growth of money market funds in the 1970s was linked to low regulated yields on bank deposits; improved technology allowing checking facilities has also been important.

Another special type of closed-end fund is a **hedge fund**, a private unadvertised mutual fund that is limited to wealthy investors¹⁴ who are willing to incur high short-term risk in exchange for high return potential.¹⁵ Managers often have capital themselves in the funds they manage. Hedge funds may engage in unlimited short-term trading, take short positions, and borrow to a greater extent than other institutions. They are usually in the legal form of either onshore investment partnerships or investment funds based in tax havens such as the Caribbean and are in each case unregulated and not subject to disclosure requirements.

Because of their ability to leverage and willingness to take risks, hedge funds may create sharp market movements and thereby provoke other institutions to similar action (e.g., in exerting pressure on currency pegs). They may also become highly vulnerable in bear markets owing to their leverage, as the experience of the Long Term Capital Management revealed (see Davis (1999d) and chapter 5). BIS (1998) reported assets of hedge funds at the end of 1997 to be \$90 billion, with annual growth of 40% being witnessed since 1990. An extensive discussion of the hedge fund sectors' structure, investment strategies, and effects on market dynamics can be found in Eichengreen et al. (1998).

1.2.3 *Risk Bearing and Regulation*

A key distinction between types of institution, which warrants further comment, links to the **locus of risk bearing**. In a defined benefit pension fund and a life insurance contract having guaranteed returns, the risk of market volatility is taken by the sponsoring company and the life insurer, respectively. In contrast, in the case of a defined contribution pension fund, a mutual fund, and a variable-linked life insurance contract, the risk is borne wholly by the individual (except for a rather low guaranteed amount for the life contract).

There appears to a widespread tendency in recent years for institutional investors to switch from **bearing risks themselves to transferring them to the household sector**, whereby the institutional investor offers less or no insurance. Life insurance companies, as

14. In the United States, individuals must have \$1 million in investable assets to be permitted to invest in onshore hedge funds.

15. See Basel Committee (1999).

discussed in section 2.2.2, are increasingly offering forms of policy in which the bulk of the return is not guaranteed but depends on investment returns (such as variable-life or unit-linked policies). In the United States, the volume of defined contribution assets for the corporate sector now exceeds defined benefit funds; defined contribution assets in 1998 were \$2199 billion, while defined benefit plans had assets of \$2132 billion. Similar trends are apparent for coverage.¹⁶ Whereas in 1975, private sector membership of defined contribution funds in the United States was 11.2 million and defined benefit fund membership was 26.1 million, by 1995 the respective figures were 36.6 million and 27.2 million, and in 1997,¹⁷ they were 40.2 million (40%) and 27 million (27%), respectively.¹⁸ Note, however, that most public sector employees who are covered by pension plans have defined benefit coverage.

In the United States, much of the growth in pension assets in recent years has tended to come from 401(k)¹⁹ plan assets, some of which result from terminations of defined benefit funds, although equally important have been extension of coverage in small firms and overall employment growth²⁰ (Berlinski and Western 1997). Nevertheless, the bulk of U.S. mutual fund assets are not retirement related. In a 1997 survey, around 50% of the United Kingdom's top 350 companies were considering switching to defined contribution (Investors Chronicle 1997). Twenty-five percent of U.K. employers used defined contribution in 1998, up from 11% in 1994, with the projection for 2003 being 35%. Meanwhile, over 20% of the workforce was covered by personal pensions.

Corporate sponsors favor defined contribution, as their risk stemming from pension obligations is sharply reduced, which may be beneficial to their cost of external funds. The household sector appears content to accept risk, given the recent good performance of

16. For details of the trends in pension provisions that this shift has entailed, see Mitchell (1999).

17. Source: Employment Benefit Research Institute Web site: www.ebri.org.

18. Note, however, that it is common for individuals to have both a defined contribution and a defined benefit plan.

19. 401(k) plans are a form of defined contribution plan offered to employees of a U.S. company, to which both employers and employees contribute and in which the individual determines the distribution of assets. The administrative costs of such funds are low, in part because of this delegation of asset allocation to the individual.

20. Note that the figures above show a constant level of defined benefit coverage rather than a decline over 1975–1997.

equity markets and also the advantages of defined contribution pension plans in terms of job mobility,²¹ in a context in which jobs for life are much less prevalent than was hitherto the case. They may also prefer the ability, offered by some defined contribution arrangements, to control the disposition of their investment—an arrangement that also reduces asset management costs by eliminating the need for the fund to undertake asset allocation. The defined contribution fund has also been at the core of many recent pension reforms in developing countries such as Chile and Argentina (Davis 1998b, 1998e, 1998f) as well as OECD countries such as Australia and Italy. In the early 1990s, the shift to defined contribution in the United States was thought to have accompanied less aggressive portfolio distributions, which could threaten overall returns in the long term (Rappaport 1992). More recently, equity proportions have risen, but the reaction of the household sector to a prolonged bear market has yet to be seen. Certainly, it was the 1970s bear market that drove the earlier shift *away* from defined contribution arrangements in countries such as the United Kingdom and led to a collapse in holdings of equity mutual funds in the United States.

In combination with the growth of mutual fund investment per se, the rise of defined contribution plans means that **households are tending to have an increasing influence on asset allocation**. More generally, it can be argued that, as in the rest of the financial sector, there is a **blurring of distinctions** between types of institutional investor, as mutual funds in particular are being used as a vehicle for retirement saving and pension saving often has a life insurance aspect.²² Insurance companies are tending to launch their own investment funds, either to run unit-linked policies or as separate profit centers. As we noted, they are also widely involved in pension provision, in provision of annuities and guaranteed insurance contracts for pension funds, and in segregated asset management for pension funds. Meanwhile, banks themselves are becoming active in this area, by purchasing or launching their own insurance companies

21. The U.S. General Accounting Office (GAO 1989) simulated equal-cost defined benefit and defined contribution plans with identical earnings and work histories and found pensions with five jobs with companies with identical defined benefits plans to be \$9,800, those with jobs with identical defined contribution plans to be \$12,100, and those with one job covered by the defined benefit plan to be \$19,100. The last figure may reflect cross-subsidies from early leavers within the defined benefit plans.

22. Defined benefit funds often include survivors' benefits and life insurance.

(where regulations permit) to form financial conglomerates, selling their own mutual funds and personal pensions, and setting up or purchasing fund managers. Pension funds and, to a lesser extent, life insurers are linking more closely to the rest of the financial system via their choices of external fund managers.

There are considerable **differences in the regulation** of the behavior of the various types of institutional investors (see also section 6.3.2). The tightness of regulation in turn tends to reflect the differences in fiduciary obligations and in the above-mentioned contractual obligations and their implications for risk bearing. In particular, regulation reflects differences in the degree to which insurance features are bundled with asset management. Mutual funds are rather lightly regulated. The main regulations of mutual funds link to information disclosure to holders (as well as various other investor protection provisions). Reflecting the nature of obligations, life insurers and defined benefit pension funds are generally subject to forms of solvency or minimum funding regulations and may also have restrictions on the disposition of assets.²³ Defined contribution pension fund regulation is typically intermediate in terms of tightness.

1.3 Institutional Investors and the Functions of the Financial Sector

Section 1.1 showed that institutional investors play an increasing role in the financial sector. As will be detailed in the rest of the book, this entails collecting saving, investing in securities and other financial assets, cross-border investment and ownership of companies.

To facilitate understanding of the causes and implications of growth of institutional investors, we consider it is useful to adopt a **functional approach to the financial system**. Such an approach seeks to define functions that the financial system is always called upon to fulfill, regardless of its institutional form. It thus provides a set of constant features of long-term developments and of more recent trends; evolution of institutional forms and of financial structure such as the growth of institutional investors may be seen as a

23. Pension funds are subject to a variety of additional regulations with respect to liabilities, such as rules regarding portability, vesting, indexation, and benefit insurance. However, the main focus here is on assets. For a broad discussion of pension regulation, see Davis (1995a); for an assessment of the specific regulatory situation for pension funds in the United Kingdom, see Davis (2000b).

form of adaptation and improvement in the ways these functions are fulfilled, under pressure of competitive forces.

Various paradigms have been proposed;²⁴ here, we highlight and utilize the one proposed by Merton and Bodie (1995). They distinguish the following key functions:

- The provision of ways of clearing and settling payments to facilitate exchange of goods, services, and assets
- The provision of a mechanism for pooling of funds from individual households to facilitate large-scale indivisible undertakings and the subdivision of shares in enterprises to facilitate diversification
- The provision of ways to transfer economic resources over time, across geographic regions, or among industries;
- The provision of ways to manage uncertainty and control risk. Through securities and through financial intermediaries, risk pooling and risk sharing opportunities are made available to households and companies. There are three main ways to manage risk: hedging, diversifying, and insuring.
- The provision of price information, thus helping to coordinate decentralized decision making in various sectors of the economy
- The provision of ways to deal with incentive problems when one party to a financial transaction has information the other does not, or when one is agent of the other, and when control and enforcement of contracts is costly

In the context of this framework, growth of institutional investors is explicable in terms of either a changing comparative advantage in the functions they fulfill (related to the characteristics described above) or an increased demand for certain functions on behalf of end users. To illustrate this, we briefly consider the role of institutional investors under the heading of each individual function. A number of these points are addressed at greater length in succeeding chapters (see also Davis 1996a, Davis 2000a):

1. **Clearing and settling payments** to facilitate exchange of goods, services, and assets. Banks, for example, may offer checking accounts, cash cards, and wire transfers, while nonfinancial firms may offer credit cards. Systems for transferring payments and for

24. See Sanford (1993), Hubbard (1994), Kohn (1994), and Rose (1994), for example.

trading, clearing, and settling securities transactions may also fall under this heading. As regards institutional investors, owing to technological advances and the innovation of money markets themselves, money market mutual funds have been able to develop and to offer transactions accounts, based on units that are redeemable at par (see chapter 5). Note, however, that growth may have been facilitated by regulations and reserve requirements on banks or fiscal incentives. Furthermore, institutional investors have themselves influenced the structure of markets, for example by encouraging development of wholesale money markets, as well as influencing the form of trading and settlements systems more generally (see chapters 7 and 8). The resulting structure enables financial and nonfinancial institutions to hold, obtain, and transfer liquidity much more readily.

2. The provision of a mechanism for **pooling of funds** from individual households so as to facilitate large-scale indivisible undertakings and **the subdivision of shares** in enterprises to facilitate diversification. Financial intermediaries, including banks, provide means to pool funds, while securities markets and securitization of claims are examples of subdivision. As we noted, pooling is a fundamental characteristic of institutional investors, which, given their size and consequent economies of scale, they can perform much more readily than households can (see chapter 2). In this context, one may note the mutually reinforcing development of securitization of individual assets (such as loans), which has provided a ready supply of assets in which institutional investors may invest in competition with banks.

3. The provision of ways to **transfer economic resources** over time, across geographic regions, or among industries. By these means, households may optimize their allocation of funds over the life cycle, and funds may be optimally allocated to their most efficient use. A capital market facilitates the efficient separation of ownership and control of capital, thus aiding specialization in production. A range of financial intermediaries are active in these processes, thus facilitating saving for retirement and finance of corporate investment. The most crucial point is that aging of the population, combined with curtailment of, and/or growing lack of confidence in, the promises of social security pension systems, has led to increased demand for transfer of resources over time via growth of pension funds per se and also to retirement savings held in life insurance companies and

mutual funds (see section 1.5.3 and Huizer 1990). More generally, there is in OECD countries an increased demand for long-term saving, related to accumulation of wealth. This function does not typically entail maturity transformation; as we noted, institutional investors, unlike banks, typically have matched assets and liabilities. As regards transfer across space, one may highlight the increased amplitude of international portfolio investment by institutional investors, which has supplanted the bank-driven flows that were typical of the 1970s (see chapter 6).

4. The provision of ways to **manage uncertainty and control risk**. Through securities and through financial intermediaries, risk-pooling and risk-sharing opportunities are made available to households and companies. There are three main ways to manage risk: hedging, diversifying, and insuring. The role of derivatives in this process has come to the fore in recent years. More generally, separation of providers of working capital for real investment (personnel, plant, equipment) from providers of risk capital that bear financial risk facilitates specialization in production. Institutional investors are well placed to use derivatives and other means of risk control on their portfolios; many of the related innovations have been introduced or developed especially to cater for institutional demand (see chapters 2 and 5). On the liabilities side of their balance sheet, they may provide forms of insurance to clients (life insurance, defined benefit pension funds).

5. Provision of **price information**, thus helping to coordinate decentralized decision making in various sectors of the economy. Financial markets provide not only means to trade but also information useful for decision making; for households, yields and securities prices provide information in consumption-saving decisions and in allocating portfolios. Firms may equally make investment and financing decisions on the basis of market prices. Not only prices per se but also implied volatility (derived from options prices) may be relevant in this context. The ability of institutional investors to employ information has been highlighted above, and this is an important additional reason for their growth. Moreover, the existence of institutional investors has important implications for the financial system as a whole. On the one hand, they should facilitate the efficient allocation of resources. On the other, there has been some criticism that they may be responsible at times for disruption of

financial markets by heightening market volatility and leading to collapses of liquidity (see chapters 5 and 6).

6. Provision of ways to **deal with incentive problems** when one party to a financial transaction has information that the other does not or when one is agent of the other and when control and enforcement of contracts are costly. Moral hazard and adverse selection are inevitable in such cases, but features of the financial system, such as delegation of monitoring by households to specialized financial intermediaries, may reduce such problems. The issue remains, however, of how households may monitor the intermediaries themselves or whether the latter have the right incentives to act in line with the interests of investors. Institutional investors have a comparative advantage over individual investors in dealing with issues of corporate governance, given the size and voting weight that they can wield. More generally, institutions as a whole exert influence on governments not to adopt lax fiscal or monetary policies, for fear of the market consequences (see chapter 6). On the other hand, it should be stressed that there are limits to institutional involvement; banks' comparative advantages in overcoming asymmetric information in loans for small firms has ruled out securities market intermediation of their liabilities to date. And there are important incentive problems in the fund management relation itself.

1.4 Institutions and Financial Development

To further aid in understanding the role of institutional investors in the financial system, it is worthwhile also to sketch in a stylized manner how financial markets develop over time and the stage at which institutions become viable and important.

1.4.1 *Development of Corporate Financing*

The processes whereby an economy develops from an informal financial system through banking to securities markets can be analyzed by use of **theories of corporate finance**. Whereas an entrepreneur can begin a firm by relying on his or her own funds and retained earnings, rapid growth of the enterprise requires access to external finance. The simplest form of this is from the entrepreneur's family, who will be able to monitor the entrepreneur closely and

hence protect their own interests. Beyond this, **banks** tend to be the first to offer funds, as they have a comparative advantage in monitoring and control of entrepreneurs who lack a track record, for example in terms of access to information, ability to take security, and ability to exert control via short maturities (see Diamond 1984, Hellwig 1991). They are also able to offer benefits to depositors in terms of pooling across investments and “liquidity insurance,” that is, the ability to offer access to deposited funds at any time, at a positive interest rate (see Diamond and Dybvig 1983). This may then dominate the alternatives of extremely undiversified finance of enterprises or hoarding.

Share issuance becomes important when bank debt becomes sizable in relation to existing own-funds. This is because the high resultant level of gearing gives rise to conflicts of interest between debt holders and equity holders, as for example owner-managers have the incentive to carry out high-risk investments (see Myers and Majluf 1984). Banks may also protect themselves by means of covenants or even the acceptance of equity stakes, which internalizes the associated agency costs. Apart from banks, at the initial stages of development of share markets, securities are typically held by wealthy individuals as an alternative, diversifiable, liquid, higher-return albeit riskier alternative to bank deposits.

Corporate bond markets are viable only when firms have a very high reputation, as this then constitutes a capital asset, that would depreciate if the firm engaged in opportunistic behavior (Diamond 1991). High credit quality is needed because bond market investors are likely to have less influence and control over management than equity holders or banks, even if one allows for the existence of covenants. Rating agencies help to alleviate associated information problems and may thereby open the bond market for firms with poor reputations or volatile profitability (“junk bonds”).

The pattern is completed by development of **institutional investors**, which by their nature have a comparative advantage over banks and individuals in equity and corporate bond financing. These advantages link in turn to aspects such as pooling, price sensitivity, and superior leverage in corporate governance. Note, however, that institutions do not typically develop before securities markets are present. (The relationship of institutional investors to capital markets is discussed in more detail in chapter 5.)

1.4.2 Three Phases of Financial Development and the Role of Banks

An alternative, complementary paradigm is provided by Rybczynski (1997), who divides the evolution of the financial system into three phases: bank-oriented, market-oriented, and securitized. With respect to the functions of the financial system outlined above, in all phases of evolution, banks are largely responsible for the functions of provision of payments services and liquidity. On the other hand, there is an adjustment in the locus of collection and allocation of saving; monitoring and disciplining users of external finance; and assumption, measurement, pricing, and management of risk. In all of these areas, institutional investors become of increasing importance as financial development proceeds.

In the **bank-oriented phase**, the external funding of nonfinancial firms is obtained from banks in the form of nontradable bank loans, with banks monitoring the performance of borrowers and disciplining them as necessary. Banks also collect the bulk of savings of the economy. Money markets are not very developed and are almost exclusively interbank. During this phase, the banks play a dominant role in the economy; most financial intermediation goes through banks and shows up in their balance sheets. They may even, if permitted, hold equity stakes in nonfinancial firms. This dominance of financial flows as well as of balance sheet components reinforces banks' position, as they are uniquely placed to access private information about borrowers, evaluate risk of prospective borrowers, and price and diversify risks. Most of banks' income is interest income, and there can be cross-subsidization between different bank products. Most emerging market economies remain in the bank-oriented phase.

During the **market-oriented phase**, banks face more competition from other providers of savings media and financing products (in particular reflecting the growth of institutional investors as well as direct holdings of securities by households). But banks remain the major source of external funding to the nonfinancial sectors. The size of money markets increases, although they are still dominated by interbank activities. Capital markets start to develop, but they mainly provide bond financing to government as well as a certain number of new issues of equity. Nevertheless, this phase is characterized by a relative decline in the traditional direct role of banks in

terms of the importance of deposits as an asset for households, loans as a source of external finance to companies, and on-balance sheet versus market financing activities. Households build up securities holdings both directly and via institutional investors. Monitoring begins to be shared between banks and institutional investors (via the rise of the takeover mechanism).

With respect to financial innovations, other market participants than banks may take a leading role and new products may emerge that compete with traditional banking products. In the banks' balance sheets, this will lead to a decline in the share of traditional bank lending, an increase in the holding of tradable assets on the assets side, and a shift from retail to costlier wholesale liabilities. Consequently, the income structure shifts toward a larger share of trading and underwriting income, while the impact of competition from investment banks and institutional investors means that cross-subsidization has to diminish. Europe and Japan may be judged to have reached this phase, as have some of the advanced emerging markets such as Chile.

In the third, **securitized phase**, the market provides the bulk of financing to the nonfinancial and also the financial sector. Corporate bonds and commercial paper substitute for bank loans, while mortgages and consumer credit may be securitized. Collecting and allocating savings, monitoring, and disciplining are undertaken mainly by financial markets (in the form of rating agencies, investment banks, and institutional investors) rather than banks, with financial assets held increasingly on the balance sheet of institutional investors. In this context, new financial products develop, such as derivatives, that allow for segmentation, unbundling, and thus separate pricing and trading of various risks, and new expertise and institutional players emerge in the financial markets. From banks' point of view, this means that trading, underwriting, advisory, and asset management activities come to center stage while traditional banking loses importance. The United States, the United Kingdom, and Canada may be judged to have reached this stage of development, and European Monetary Union will accelerate its advent in Continental Europe (see chapters 4 and 6).

1.4.3 Preconditions for Financial Development

Evidence from history suggests that the progress of an economy through the stages described in the sections above depends on a number of **preconditions** (see Davis 1998e). Partly, these relate to

macroeconomic and structural factors. Without a satisfactory framework for enforcing property rights and financial contracts, as well as for providing public information, securities markets will not tend to develop. Rather, forms of relationship banking with equity stakes held mainly by banks in borrowers are likely to be the limits of financial development.²⁵

Institution of limited liability for equity claims, a structure for collateralizing debt, satisfactory accounting standards, and appropriate protection against securities fraud (listing requirements and insider trading rules, for example) are also important for public securities markets (see Stiglitz 1993). Moreover, the development and satisfactory regulation of the banking system may be a precondition for growth of securities markets and institutional investors, given the role of banks in providing credit to underwriters and market makers, even when they do not take on security positions themselves (Blommestein and Spencer 1996).

1.5 Supply and Demand Factors Underlying the Growth of Institutional Investors

In this section, we seek to elucidate further the reasons for the recent rapid growth of institutional assets that were outlined in section 1.1, viewed also in the context of the functions of the financial sector and stylized patterns of financial development outlined in section 1.4. We consider the extent to which institutional growth arises from:

- **supply-side factors** (institutions have offered their services relatively more efficiently, thus fulfilling the functions of the financial system more effectively) or
- **demand-side factors** (households have enhanced requirements for the types of financial functions that institutional investors are able to fulfill).

1.5.1 Household and Institutional Balance Sheet Composition

Since the vast majority of institutional assets are held on behalf of the household sector, such an investigation requires one to assess the

25. This point raises the issue of whether structural aspects of financial systems are self-perpetuating or what shocks could lead to structural change. One current issue is whether European monetary union will radically change E.U. financial sectors (Davis 1998d).

role that institutions have played in the context of household sector balance sheets.

Table 1.8 shows that **household assets and liabilities have increased** in all of the countries studied, with gross financial assets rising from around 130% of GDP in 1970 to over 230% in 1998 and liabilities from under 40% to around 60%. Net financial wealth has also risen strongly, from around 90% to 180% of GDP, reflecting the more rapid growth of gross assets than liabilities. Patterns are remarkably similar in the Anglo-Saxon countries and in Europe and Japan (although both assets and liabilities tend to be lower in the latter). As is shown in table 1.9, **within gross financial assets**, there has been a decline in the share of deposits and (in the Anglo-Saxon countries) direct holdings of bonds and equities, while there has been a universal sharp rise in the portfolio share of institutional assets. The relative decline in equity holdings is reflected in steady decumulation in flow terms, with outflows on a net basis occurring every year in the United States and the United Kingdom.

A **comparison of these patterns for households with the portfolios adopted by institutional investors** allows one to gain a view of the effects of institutionalization on households' portfolios in terms of the instruments that are ultimately held. Reflecting the characteristics outlined in section 1.2.2, notably the long-term nature of liabilities, institutions such as pension funds hold far more equities and foreign assets as a proportion of the portfolio than households do and fewer liquid assets (table 1.10). This is true to a lesser extent for life insurers (table 1.11) but even more so for mutual funds, with the exception of money market funds (table 1.12). Mutual funds tend to hold more equities and foreign assets than pension funds do, while life insurers hold more nominal assets such as loans and bonds. Whereas mutual funds concentrate largely on securities, life insurers and pension funds in many countries hold considerable shares of property and loans.

We now go on to **assess the supply and demand factors** underlying growth of institutional investors in more detail. Applied specifically to households, the supply-side factors are those that encourage households to hold their saving in the form of institutional liabilities rather than other types, namely, bank deposits and direct holdings of securities. The demand factors outline why households' own characteristics or other background features are changing so that they may increase their demands for institutional saving. In effect, these

Table 1.8
Household Assets and Liabilities/GDP

		1970	1980	1990	1995	1997	1998	Change 1970–1998
United Kingdom	Assets	1.82	1.16	2.07	2.75	3.11	3.22	1.41
	Liabilities	0.39	0.35	0.80	0.75	0.74	0.75	0.36
	Net financial wealth	1.43	0.82	1.27	2.00	2.38	2.47	1.04
United States	Assets	1.90	1.66	2.20	2.57	2.84	3.10	1.20
	Liabilities	0.48	0.55	0.68	0.72	0.71	0.73	0.24
	Net financial wealth	1.42	1.11	1.52	1.85	2.13	2.37	0.95
Germany	Assets	0.78	1.01	1.26	1.35	1.47	1.50	0.72
	Liabilities	0.38	0.50	0.54	0.56	0.61	0.62	0.24
	Net financial wealth	0.41	0.51	0.72	0.80	0.86	0.88	0.47
Japan	Assets	0.98	1.44	2.20	2.42	2.42	2.52	1.54
	Liabilities	0.38	0.54	0.77	0.77	0.75	0.77	0.38
	Net financial wealth	0.60	0.91	1.43	1.66	1.68	1.76	1.15
Canada	Assets	1.48	1.54	1.74	1.97	2.05	2.08	0.60
	Liabilities	0.51	0.56	0.63	0.66	0.68	0.70	0.20
	Net financial wealth	0.97	0.98	1.11	1.31	1.37	1.37	0.40
France	Assets	1.14	1.05	1.42	1.59	1.87	1.99	0.88
	Liabilities	0.42	0.44	0.57	0.42	0.42	0.43	0.01
	Net financial wealth	0.72	0.61	0.85	1.17	1.45	1.56	0.87
Italy	Assets	0.92	0.87	1.68	1.91	2.08	2.23	1.30
	Liabilities	0.07	0.06	0.19	0.24	0.25	0.20	0.12
	Net financial wealth	0.85	0.80	1.49	1.67	1.83	2.03	1.18
G-7	Assets	1.29	1.25	1.80	2.08	2.26	2.38	1.09
	Liabilities	0.38	0.43	0.60	0.59	0.59	0.60	0.22
	Net financial wealth	0.91	0.82	1.20	1.49	1.67	1.78	0.87
Anglo-Saxon	Assets	1.73	1.46	2.00	2.43	2.67	2.80	1.07
	Liabilities	0.46	0.49	0.70	0.71	0.71	0.73	0.27
	Net financial wealth	1.27	0.97	1.30	1.72	1.96	2.07	0.80
Europe and Japan	Assets	0.96	1.09	1.64	1.82	1.88	2.07	1.11
	Liabilities	0.31	0.39	0.52	0.49	0.50	0.50	0.19
	Net financial wealth	0.64	0.71	1.12	1.32	1.38	1.57	0.93

Source: National flow-of-funds balance sheet data; for detailed sources, see table 1.1.

Table 1.9

Household Sector Balance Sheets (Proportions of Gross Financial Assets)

		1970	1980	1990	1995	1997	1998	Change 1970–1998
United Kingdom	Deposits	0.34	0.43	0.31	0.22	0.22	0.21	−0.13
	Bonds	0.07	0.07	0.01	0.02	0.01	0.01	−0.06
	Equities	0.24	0.12	0.12	0.15	0.17	0.15	−0.09
	Institutions	0.23	0.30	0.48	0.51	0.53	0.55	0.31
United States	Deposits	0.28	0.33	0.23	0.16	0.14	0.13	−0.15
	Bonds	0.13	0.10	0.11	0.10	0.07	0.06	−0.07
	Equities	0.36	0.21	0.14	0.22	0.24	0.23	−0.12
	Institutions	0.22	0.28	0.39	0.42	0.47	0.50	0.28
Germany	Deposits	0.59	0.59	0.48	0.43	0.40	0.40	−0.19
	Bonds	0.08	0.12	0.16	0.16	0.14	0.13	0.06
	Equities	0.10	0.04	0.07	0.05	0.08	0.09	−0.01
	Institutions	0.15	0.17	0.21	0.29	0.30	0.32	0.17
Japan	Deposits	0.55	0.69	0.60	0.60	0.62	0.60	0.04
	Bonds	0.06	0.09	0.09	0.05	0.03	0.02	−0.03
	Equities	0.12	0.07	0.09	0.06	0.05	0.04	−0.07
	Institutions	0.14	0.13	0.21	0.29	0.31	0.28	0.14
Canada	Deposits	0.31	0.38	0.36	0.32	0.30	0.30	−0.01
	Bonds	0.14	0.08	0.05	0.06	0.05	0.04	−0.09
	Equities	0.27	0.24	0.21	0.25	0.28	0.30	0.03
	Institutions	0.22	0.21	0.28	0.30	0.32	0.34	0.13
France	Deposits	0.49	0.59	0.38	0.35	0.32	0.29	−0.20
	Bonds	0.06	0.09	0.04	0.05	0.03	0.02	−0.03
	Equities	0.26	0.12	0.26	0.23	0.29	0.32	0.07
	Institutions	0.06	0.09	0.26	0.33	0.32	0.31	0.26
Italy	Deposits	0.45	0.58	0.35	0.28	0.23	0.23	−0.22
	Bonds	0.19	0.08	0.19	0.21	0.22	0.18	−0.02
	Equities	0.11	0.10	0.21	0.21	0.25	0.30	0.19
	Institutions	0.08	0.06	0.08	0.10	0.10	0.10	0.02
G-7	Deposits	0.43	0.52	0.39	0.34	0.32	0.31	−0.12
	Bonds	0.10	0.09	0.09	0.09	0.08	0.07	−0.04
	Equities	0.21	0.13	0.16	0.17	0.20	0.21	0.00
	Institutions	0.16	0.18	0.27	0.32	0.34	0.34	0.19
Anglo-Saxon	Deposits	0.31	0.38	0.30	0.23	0.22	0.21	−0.10
	Bonds	0.11	0.08	0.06	0.06	0.05	0.04	−0.07
	Equities	0.29	0.19	0.16	0.21	0.23	0.23	−0.06
	Institutions	0.22	0.26	0.38	0.41	0.44	0.46	0.24
Europe and Japan	Deposits	0.52	0.62	0.45	0.42	0.39	0.38	−0.14
	Bonds	0.09	0.10	0.12	0.12	0.10	0.09	−0.01
	Equities	0.15	0.08	0.15	0.14	0.17	0.19	0.04
	Institutions	0.11	0.11	0.19	0.25	0.26	0.25	0.15

Source: National flow-of-funds balance sheet data; for detailed sources, see table 1.1.

Table 1.10
Pension Funds' Portfolio Composition, 1998 (Percent)

	Liquidity	Loans	Domestic Bonds	Domestic Equities	Property	Foreign Assets
United Kingdom	4	0	14	52	3	18
United States	4	1	21	53E	0	11E
Germany	0	33	43	10	7	7
Japan	5	14	34	23	0	18
Canada	5	3	38	27	3	15
France	0	18	65	10	2	5
Italy	0	1	35	16	48	0

E = Estimated.

Sources: National flow-of-funds balance sheets, Mercer (1999).

Numbers do not always add to 100 owing to "miscellaneous assets."

Table 1.11
Life Insurers' Portfolio Composition, 1998 (Percent)

	Liquidity	Loans	Domestic Bonds	Domestic Equities	Property	Foreign Assets
United Kingdom	5	1	25	48	6	13
United States	6	8	52	26	0	1
Germany	1	57	14	17	4	0
Japan	5	30	36	10	0	9
Canada	7	28	55	26	7	3
France	1	2	74	15	7	0
Italy	0	1	75	12	1	0

Source: National flow-of-funds balance sheets, OECD.

Numbers do not always add to 100 owing to "miscellaneous assets."

Table 1.12
Open-End Mutual Funds' Portfolio Composition, 1998 (Percent)

	Liquidity	Loans	Domestic Bonds	Domestic Equities	Property	Foreign Assets
United Kingdom	4	0	8	56	2	33
United States	17	0	30	51	0	N.A.
Germany	10	0	22	18	0	29
Japan	23	18	27	9	0	22
Canada	20	3	18	31	0	23
France	29	0	37	20	0	14
Italy	19	0	54	22	0	0

N.A. = not available.

Source: FEFSI, National flow-of-funds balance sheets.

sections draw out the economic implications of the features and functions of institutions that were set out in sections 1.2 and 1.3.

1.5.2 Supply-Side Factors Favoring Growth of Institutional Investors

The link between the “supply side” and the functions of the financial system is clear; institutional investors prove, in a competitive financial system and with current technology, to **fulfill financial functions** (section 1.3) **better than other arrangements**. We begin by outlining some longer-term structural advantages of institutional investors that have come to the fore as the sector develops before going on to assess some recent developments that compound such advantages.

As a baseline for considering the supply-side effects, it is worth noting **patterns of asset holdings that held before institutional investors developed**. Wealthy individuals were able to hold diversified securities portfolios at high cost, while shareholding tended to be uneconomic for those with lower wealth. Traditionally, and still to some extent in Europe and Japan, this led middle- and low-income individuals to hold bank deposits as a preferred means of saving, despite lower rates of return. The pattern as institutional sectors develop has been for the household sector to reduce holdings of deposits, bonds, and equities while increasing holdings of mutual funds, pension funds, and life insurance. Middle- and low-income individuals shifted out of deposits, and high-income individuals moved out of bonds and equities held directly (see table 1.9). Note that mutual funds in particular are attractive to the household sector because they typically offer a rather low level of minimum holding, for which the reduction in transactions costs would be particularly marked. With mutual funds, unlike life insurance or pension funds, there is also no need for a long-term savings contract.

1.5.2.1 Structural Aspects

Institutions can offer the possibility of **investing in large-denomination and indivisible assets** such as property that are unavailable to small investors. **Professional asset management costs** are shared among many households and are markedly reduced as a consequence. Institutions may as a consequence of professional management offer a superior risk-return profile. Hence, the direct

costs to households of acquiring the information and knowledge needed to invest in a range of assets is eliminated (although costs of monitoring the asset manager remain). **Customer services**, including record keeping and the ability to move money around among funds, is an attraction notably for mutual funds.

Individual investors find it difficult to **control the companies** in which they hold shares. As is discussed in greater detail in chapter 6, institutional investors are much more readily able to exert leverage on firms than individuals are, be it via “exit” (seeking out and selling to takeover raiders) or “voice” (exerting direct influence on corporate management). Indeed, lack of legal protection for shareholders in many countries tends to discourage direct equity investment by households altogether (see La Porta et al. 1999). In both contexts, institutions can make a major contribution to provision of equity finance to the corporate sector, thus allowing companies to benefit from a lower cost of equity capital.

Institutional investors, by specializing in certain types of asset, can offer a **wider range of options** to their holders on a cost-effective basis. The development of country funds, for example, has proved attractive not only to households but also to other institutional investors.

A particular feature of open-end mutual funds is that, like banks, they offer **liquidity insurance** to customers by allowing redemption of funds pro rata to the net assets of the fund without notice. Such liquidity is absent for most other types of institutional investors (although policy loans offered by life insurers are akin). They impose a cost on the fund—and on long-term holders—by forcing it to hold more cash and liquid assets than would otherwise be the case. Fee structures are often designed to reduce the incidence of withdrawals (Chordia 1996). Improvements in liquidity to customers may go beyond those linked solely to transactions costs. In the United States, checks can be written on long-term assets of mutual funds such as equities and bonds. Also, transactions or sales may be made by phone or by the Internet at the end-of-day net asset value; and the investor can costlessly exchange shares of one mutual fund for those of another within the same fund-family, thus changing the entire balance of the portfolio.

Institutions can also offer other forms of **insurance** that are not available to individual investors, as a consequence of the pooling of risks (as in the case of an insurance company), with a backup in

terms of capital (for an insurance company or pension fund) or by investing in very liquid and high-quality instruments (for money market funds).

Fiscal advantages have often been accorded to institutional investors, thus increasing their attraction to investors.²⁶ The tax advantage of exemption of contributions and asset returns is common for pension funds where provision of such funds is voluntary for companies or individuals. But life insurance contributions also benefit from tax exemption in a number of Continental European countries, and mutual funds do in some countries also.²⁷ Money market funds' growth in France in the 1980s links to fiscal benefits.

Historically, the **transactions costs** that would need to be incurred for a household of average means to diversify via direct securities holdings²⁸ on an individual basis have been extremely high. Excess risk incurred if diversification is insufficient would not be compensated by higher return (as such risk is diversifiable to the market as a whole). Despite the relatively low levels of commission costs in the United States, estimates based on data for the early 1990s suggest that costs amounted to 1.2–9.8 percentage points per year on a seven-year holding period, depending on the size of the holding. Even for an investor with \$100,000 to invest, 150–200 basis points (bp)²⁹ of commission would be incurred per year (Sirri and Tufano 1995). Such figures were typically much higher elsewhere in the G-7 and beyond. Even deregulation at times led costs of individual investment to increase: The deregulation of fixed stock market commissions typically favored large investors and eliminated cross-subsidies to small investors. This was the case both for the New York Stock Exchange (NYSE) deregulation of commission rates in 1975 and the U.K. "Big Bang" of 1986. Jarrell (1984), for example, points out that whereas institutional commissions on the NYSE fell by 50% in the five years after deregulation, the charge for transacting under 1000 shares by members of the public rose by 17% (see table 1.13).

26. The power of tax privileges is also illustrated by the decline in institutional assets that may follow radical tax reform, such as removal of pension funds' tax benefits in New Zealand.

27. In some countries, such as Germany, money market funds (in Luxembourg) have been an instrument of tax evasion.

28. Typically, around forty shares are needed to offer the same volatility as the market as a whole; in the United States, the "round-trip" commissions needed would in the early 1990s have amounted to 12% of value, even for a person of median wealth (Sirri and Tufano 1995).

29. A basis point is 1/100 of 1%.

Table 1.13

Effective Commission Rates on the NYSE for Public and Institutional Orders

Order Size (Number of Shares)	0–199		200–999		1000–9999		10000+	
	Public	Instit	Public	Instit	Public	Instit	Public	Instit
Trade								
1975	50.1	59.6	32.6	45.7	19.5	27.6	8.8	15.0
1980	59.3	47.3	38	30.9	17.3	14.8	4.3	7.5
% change	+18.4	–20.6	+16.6	–32.4	–11.3	–46.4	–51.1	–50

Public = public trades; Instit = institutional trades.

Source: Jarrell (1984).

In this context, institutional investors such as mutual funds and pension funds tended to offer much **lower costs of diversification by proportional ownership**. This has historically been of particular importance given minimum size investment barriers. Fees for managing such investments, as is discussed further in chapter 3, can be as low as 25 bp for (company) pension funds, 15 bp for index mutual funds, and 100 bp for actively managed mutual funds. One reason for this is that there are lower proportionate commissions³⁰ for large transactions, although this may be offset by other costs such as a wider bid-offer spread (chapter 8). Institutional investors can compound this advantage by negotiating lower commission costs and custodial fees.

More recently, the development of online brokerage in the United States and online trading elsewhere has tended to reduce costs of direct investment in securities on the part of households, making the transactions cost benefit of institutional investment less decisive.³¹

The **regulatory structure** that is applied to certain institutions such as mutual funds and wholesale investment managers has not typically sought to limit entry and competition but has sought rather to ensure sufficient disclosure, encourage prudent asset structures, and prevent fraud. This has ensured keen competition, as is discussed in chapter 3. In addition, regulation has focused on protection of investors against fraud and conflicts of interest and thus has helped to maintain consumer confidence.

30. Note, however, that institutional commissions are often distorted by so-called soft commissions, which pay for unrelated services such as research (see chapter 8).

31. Earlier, in the 1970s and 1980s, there was the growth of discount brokerage in the United States and the United Kingdom following deregulation of stock market fees and commissions, and benefits accrued of computerization in back-office processing.

It is in the context of these favorable structural factors that the declining share of households' portfolios held in the form of securities and the rising proportion of equities and bonds held via institutions can be explained. Institutional investors offer superior forms of pooling and liquidity and more generally have broadened the availability of investment options to the household sector. Institutionalization has in particular enabled households that were previously confined to deposits and life insurance to participate in the securities markets.

These **benefits have needed to be sufficient to offset some of the costs** that institutional investment imposes vis-à-vis direct securities holdings. For example, there are direct sales and marketing costs of mutual funds, charges for investment management and other ongoing services (which have been rising recently), and tax options forgone (e.g., in terms of timing of capital gains for tax efficiency). In some countries, these costs may be artificially high owing to entry barriers (such as control of distribution networks) that block competing firms from the market. More generally, households face a variety of principal-agent problems in monitoring and controlling asset managers that, if not resolved, may result in poor investment performance as managers act in their own interests rather than those of investors (chapter 2). As we have noted, direct securities' holdings relative costs have diminished recently, even for small transactions, owing to the growth of online brokerage and trading.

The net structural attractions have been enhanced by a number of more recent changes, which have enabled institutions to perform their investment role with even greater efficiency relative to the alternatives.

1.5.2.2 Recent Developments

Deregulation of the activities of institutions in the past two decades has added a dynamic aspect to the overall regulatory approach noted in section 1.2.3. In the 1970s and 1980s, institutions gained from deregulation of securities market commissions, since they have been able, first, to press for deregulation of fixed commissions by disintermediating the regulated market and, second, following deregulation, to exert bargaining power to reduce the commissions they pay. (See Jarrell (1984) for an account of this process in the context of the NYSE in the 1970s.)

More recently, deregulation of some restrictions on the portfolios of institutions, in particular in terms of international investment, has offered wider possibilities of diversification, as has deregulation in terms of production and distribution of their respective products. By removing remaining barriers to competition in asset management, deregulation has ensured that market forces have been able to fully operate, which has ensured low costs to the end user. (See the discussion of U.S. and U.K. asset management fees in chapters 3 and 4.) Another factor underlying heightened competition has been deregulation of the activities of banks and securities firms and banks' interest after the Basle capital adequacy accord in fee income generating that economize on the use of capital. As detailed in chapter 3, costs are higher in Continental Europe, where deregulation has been slower or aspects of market structure, such as domination of distribution by banks, have inhibited competition.

Institutions have benefited from recent **technological advances** in communications technology and information technology (IT), including efficient trading, clearing, and settlement systems, which enabled funds to be managed at lower cost. It would clearly be uneconomic for individual households to make the investment in IT that would be typical of an institution and can hence be shared (although development of Internet-based services is now narrowing the gap). Equally, technological advance has facilitated the development of checkable money market funds.

New financial instruments such as mortgage-backed securities and collateralized mortgage obligations, which require immense data-processing capabilities to make them viable, have been heavily utilized by institutions; in this context, one may note also enhanced possibilities of risk management via use of derivatives (see section 2.3.3).

Products offered by competing suppliers of savings products have proven increasingly unattractive. This is notably the case for bank deposits vis-à-vis money market funds. Historically, banks offered low or administered rates that failed to protect against inflation, while more recently, banks offered lower interest rates than were obtainable in the market owing to the banks' higher fixed costs (such as branch networks), capital requirements, reserve requirements, and repeated loan losses. In this context, institutional investors are not typically subject to minimum reserve requirements, an

Table 1.14
Social Security Benefits and Institutional Investment

	Social Security Replacement Ratios	Institutional Investment/ GDP (%), 1998
United Kingdom	60–33	197
United States	71–45	176
Germany	45–43	35
Japan	N.A.	63
Canada	57–26	105
France	67–51	90
Italy	78–75	54

N.A. = not available.

Note: Replacement ratios—pensions as a percentage of final salary—are for final salaries of \$20,000 and \$50,000. The data are for 1997.

Source: Watson Wyatt (1997), table 1.6.

implicit tax on banks, although portfolio regulations on institutions may at times act in a similar way.³²

Among institutional investor sectors themselves, life insurance sectors have often faced difficulties in competing with pension funds and mutual funds. This is because life insurance sectors are often heavily regulated, have traditionally nominal fixed returns and high commission charges for remunerating salesmen, and in some countries face tight asset regulations that limit returns.

Social security benefits are also an alternative product to institutional investors for retirement income provision. As Davis (1997a) argues, generous social security is likely to constrain institutional growth, especially in the form of pension funds. This is especially the case, as in Continental Europe, where social security provides generous benefit promises to higher-income individuals (see table 1.14). On the other hand, growth in institutional investment is particularly marked where social security provides only a basic pension to alleviate poverty but does not have an important income insurance element, as in the Netherlands³³ and the United Kingdom.

Increasingly, however, it is the generous social security pensions that are seen as unsustainable in the light of demographic developments. (See the demand-side factors discussed below.) On balance, the governments that introduced such systems did not sufficiently

32. In the Euro area, ECB regulations permit the imposition of reserve requirements on money market mutual funds.

33. For a discussion of the Dutch pension system, see Davis (1996c) and Clark (2000b).

consider risks in terms of birth rates, sustainable economic growth rates, and death rates. Growing public concern about sustainability, as for example in Japan, encourages institutional saving as a precaution, notably via life insurance and mutual funds. Elsewhere, as in Australia and Chile, the growth of private pensions following a reform of social security has ensured high coverage and large, steady inflows to institutional investors. This has fed back strongly on the costs of asset management, leading to economies of scale and a wider range of services being offered also to nonpension clients.

Finally, an important environmental factor has been the **bull market** in both equities and bonds for much of the 1980s and 1990s. This has made investment in securities via institutional investors seem yet more attractive than the above supply-side factors might suggest. There has been a two-way process; in effect, the growth of institutions and, notably, mutual funds has helped to create a widespread equity culture. How such a culture will survive a bear market remains to be seen. Certainly, as Jorion and Goetzmann (1999) show, the real rates of return on equity in the 1990s are well above historical averages in the United States and the United Kingdom, and these themselves have been atypically well-performing equity markets over the longer term.

1.5.3 Demand Factors

The key demand-side factors underlying the growth of institutions are **demographic developments and their link to saving patterns**. The basic argument is simply stated: The population is aging, owing to a decline in birth rate and rise in life expectancy; saving for retirement is increasingly taking place via institutional investors (owing to various supply factors summarized below); such saving naturally tends to follow a life cycle pattern; and hence both aggregate saving and institutional saving are currently being boosted because the “baby boom” generation is at the time of maximum saving. We address these arguments one by one, with a particular focus on demographics. These patterns may drive institutional growth for many years to come as the entire population ages in the light of falling birth rates and existing social security systems become unsustainable. Benefits from this effect are not confined to pension funds. Nonpension saving via life insurance and mutual funds is strongly boosted where pension funds are less well established.

Table 1.15
Life Expectancy at Birth

Years	1970–1975	1980–1985	1990–1995	2000
United Kingdom	72	74	76	78
United States	73	75	77	77
Germany	71	73	76	77
Japan	74	77	79	81
Canada	73	76	78	79
France	72	75	78	79
Italy	72	75	78	79

Source: World Bank (1996), U.S. Department of the Census.

1.5.3.1 Past Demographic Factors and Institutional Saving

As regards **demographics**, OECD countries have all witnessed an increase in life expectancy and a decline in the birth rate in recent decades. These have already given rise to an aging population, with a high proportion of the population in the high saving age groups and also an increasing burden of dependents relative to the population of working age.

The higher **life expectancy** is, the longer individuals expect to live after retirement and the greater the need for long-term saving. As table 1.15 shows, the life expectancy at birth in the G-7 countries has risen from around 72 to 78 between 1970 and 2000. Life expectancy in Japan is now 81. Underlying these patterns are better health care, medical advances, and improved overall living standards.³⁴

Except in the United States, there has also been a decline in **birth rates** since 1970, which has reduced the size of the younger generations who would otherwise borrow and offset the saving of their older counterparts (see table 1.16). In 2000, there were exceptionally low fertility rates³⁵ (of below 1.5) in Germany, Italy, and Japan, while the rate in France, Canada, and the United Kingdom was around 1.7 and that in the United States was 2.1. Only in the United States is the fertility rate sufficient alone (i.e., without immigration) to generate a stable population. Underlying the decline in fertility is the emerging pattern of later marriage and greater activity of women in the labor market, which has increased the opportunity cost of having children,

34. Accompanying these is a pattern of early retirement, thereby also lengthening the potential retirement period (Davis 1997c).

35. Fertility rates indicate the number of children born to an average woman over her lifetime.

Table 1.16
Fertility Rates (Number of Children per Female)

	1970–1975	1980–1985	1990–1995	2000
United Kingdom	1.8	1.8	1.8	1.7
United States	1.8	1.8	2.0	2.1
Germany	1.5	1.4	1.2	1.4
Japan	1.9	1.8	1.5	1.4
Canada	1.8	1.7	1.9	1.6
France	1.9	1.8	1.7	1.7
Italy	2.2	1.4	1.3	1.2

Source: World Bank (1996), U.S. Department of the Census.

as well as more general social and attitudinal changes.³⁶ Reflecting the decline in fertility, the generation born in the European Union in the 1970s is 17% smaller than that of the 1960s, and the 1980s generation is 25% smaller. In all of the G-7, as well as the European Union, the retirement of this baby boom generation offers a particular challenge to systems of retirement income provision.

Broadly speaking, these patterns have already influenced institutional saving by **increasing the proportion of the population in the high saving age groups** (roughly 30- to 60-year-olds). A strong effect of demographics on saving to date is found by many studies, most of which in turn attribute this to a life cycle pattern of saving.³⁷ For example, Masson et al. (1995), in econometric work on savings patterns across countries, find that consistent with the life cycle view, the total dependency ratio is negatively associated with total private saving, in both OECD countries and developing countries. The other main determinant of saving in their econometric estimates is income growth. Interest rates and terms of trade have positive but often statistically insignificant effects on saving in the econometric estimates; income per head raises saving at low income levels but reduces it at higher levels.

36. Davis (1997c) notes that the highest fertility rates among E.U. countries today are in Scandinavian countries, which provide comprehensive and subsidized child care facilities, thus spreading the burden of child care from the family to the economy as a whole.

37. The life cycle hypothesis assumes that consumers derive utility from a smooth pattern of consumption over both their working and nonworking life. As regards the implications of retirement, this entails the accumulation of assets during the working life, which will be decumulated after retirement.

Table 1.17
Projections of Elderly Dependency Ratio to 2030

Population 65 and Over as a Percentage of Population Aged 15–65	1960	1990	2010	2030
United Kingdom	17.9	24.0	25.8	38.7
United States	15.4	19.1	20.4	36.8
Germany	16.0	21.7	30.3	49.2
Japan	9.5	17.1	33.0	44.5
Canada	13.0	16.7	20.4	39.1
France	18.8	20.8	24.6	39.1
Italy	13.3	21.6	31.2	48.3
Memo: E.U. average	16.5E	21.4	25.9	40.3

E = estimated.

Source: Bos et al. (1994).

1.5.3.2 Future Demographic Changes

All demographic projections for OECD countries show a **continuation and intensification of the ongoing process of aging** in the future. These patterns provide a stimulus to institutionalization from a number of angles. First, existing funded systems will face higher demands for retirement saving. Second, governments with generous pay-as-you-go social security realize that they are no longer viable and seek to encourage private funding instead. Third, even absent government action, individuals lose confidence in social security promises and begin to save for retirement autonomously, be it via pension funds, life insurance, or mutual funds.

Highlights of a **recent demographic projection** for the G-7 by the World Bank are provided in table 1.17.³⁸ The table assumes that fertility rates converge gradually from current levels to replacement in 2030; that life expectancy tends gradually toward peaks of 83.3 and 90 for men and women, respectively; and that migration remains around current levels—generally zero. Clearly, the fertility assumption could be too high. Nevertheless, at least for the next fifty years, such projections can be made with reasonable precision, given the fact that many of the individuals concerned are already born, while birth rates and life expectancy change rather slowly. The dominance of the first of these factors is shown by the fact that projections are similar for some time with fertility rates of 2.5 or 1.7 and abstracting from migration.

38. Source: Bos (1994).

Table 1.17 shows that the demographic shift will be **particularly marked in the years from 2010 onward**. Whereas in 1990, the average G-7 dependency ratio was around 21%, it is expected to rise to over 25% in 2010 and 40% in 2030. In Germany and Italy, the elderly dependency ratio will be over 45% in 2030. The aging of the population is also anticipated in the United States, but the level expected in 2030 remains somewhat lower than that in the rest of the G-7 and the European Union. There is also expected to be an increasing proportion of very old individuals, who may need additional, and costly, health care as well as pensions. The share of young dependents is expected to be flat, but they tend to be less costly than the old.³⁹ The total dependency ratio (including those under age 15 and over age 65 in the numerator) will be over 70% in 2030 in Germany and Italy, according to these projections. Note that the burden of dependency ratios is also affected by shifts in the start and finish of working life and of unemployment. There have been tendencies, notably in Europe, for the average retirement ages to fall and for education to increase in length, while unemployment has also tended to increase (Davis 1997c).

1.5.3.3 Pressures on Pension Systems in the Wake of Population Aging

Roseveare et al. (1996) of the OECD have estimated **future pension expenditures** for G-7 countries on a comparable basis. They constructed detailed simulation models for each country based on known features of the pension schemes (retirement age, indexation provisions, etc.) as well as utilizing demographic projections (which were those from the World Bank illustrated above). Estimates cover a broad range of welfare benefits and complementary pension plans as well as basic social security pensions. The projection horizon is 2070. The calculations assume a discount rate of 5%, and productivity growth is assumed to be 1.5%. Naturally, such estimates omit some of the more detailed aspects of national economies and institutional features of social security schemes, but they do have the advantage of a uniform methodology and assumptions. As table 1.18 shows, the estimates suggest that pension expenditure will rise by 7% or more of GDP over 1990–2040 in Italy, Japan, and Germany and will more

39. Heller et al. (1986) accordingly estimate that social expenditures will rise in the major industrial countries even if savings in education and family benefits are taken into account.

Table 1.18
Projections of Pension Costs (OECD Estimates)

Pension Expenditure/GDP	1995	2000	2010	2020	2030	2040
United Kingdom	4.5	4.5	5.2	5.1	5.5	5.0
United States	4.1	4.2	4.5	5.2	6.6	7.1
Germany	11.1	11.5	11.8	12.3	16.5	18.4
Japan	6.6	7.5	9.6	12.4	13.4	14.9
Canada	5.2	5.0	5.3	6.9	9.0	9.1
France	10.6	9.8	9.7	11.6	13.5	14.3
Italy	13.3	12.6	13.2	15.3	20.3	21.4

Source: Roseveare et al. (1996).

than double in Japan relative to GDP. Peak ratios of old-age pension payments to GDP in 2040, with unchanged policies, would be over 15% of GDP in Italy and Germany. At the same point, they would be 5% or less in the United Kingdom⁴⁰ and below 10% also in the United States and Canada. Assuming unchanged policies on benefits and maintenance of pay-as-you-go financing, contributions would have to increase sharply. With unchanged contribution rates,⁴¹ social security pension contributions would fall far short in most E.U. countries and in Japan, implying sizable public sector deficits.

Using the same methods, Roseveare et al. (1996) have also estimated the current and future **discounted liabilities of social security** pension systems for the G-7 countries. These indicate the capitalized value of identified flows over the period up to 2070. The results are shown in table 1.19. Estimates of gross liabilities range from 142% to 401% of 1994 GDP, equivalent to at least three times conventional government debt as a percentage of GDP. Note that in the gross calculation the OECD, no offset is allowed for future contributions in calculating net liabilities. An attempt is also made to assess projected contributions and hence net liabilities, assuming that current contribution rates are maintained. In general, future contributions were found to be well below present and future obligations, to an extent varying from 18% to 153% of 1994 GDP, even allowing for social security assets. There are net liabilities of over 100% of GDP in France and Canada. But as the net liabilities are the

40. Details of the U.K. reforms that have led to this situation are provided in Davis (1997b).

41. This would, of course, be contrary to the principle of pay-as-you-go, according to which contribution rates should be amended regularly so as to equalize expenditure and revenues.

Table 1.19

Present Value of Public Pension Liabilities as a Percentage of 1994 GDP
(OECD Estimates)

	Pension Payments	Contributions	Balance
United Kingdom	142	118	-24
Germany	348	286	-62
Japan	299	192	-70
Canada	204	97	-101
France	318	216	-102
Italy	401	341	-60
United States	163	134	-23

Source: Roseveare et al. (1996). French estimates exclude "fictive contributions"; German estimates exclude statutory transfers from the federal government.

Table 1.20

Present Value of Net Pension Liability, 1995–2050 (IMF Estimates)

As % of 1994 GDP	Net Pension Liability	Memo: Contribution Gap
United Kingdom	5	0.1
Germany	111	3.4
France	114	3.3
Italy	76	2.5
United States	26	0.8

Source: IMF (1996). The contribution gap is the difference between the contribution rate that is needed to reduce the net asset position to zero and the current contribution rate.

difference between two large and offsetting numbers, the calculations *are* sensitive to the choice of discount rate.

A further set of calculations has been prepared by the IMF, as presented in their World Economic Outlook for May 1996. These are presented in table 1.20. The real interest rate is assumed to be 3.5% and productivity growth 1.5%; the projection horizon is 2050, and the demographic projections are those of Bos (1994). Results are broadly equivalent to those of the OECD. The United Kingdom is always in the best position. The IMF also calculates the contribution gap, that is, the difference between the sustainable and actual rate of contributions, as a proportion of GDP. In each case, the difficulties of the systems in Germany, France, and Italy are highlighted.

We noted above that besides simple cuts in social security benefits, increased funding of pensions will be an important aspect of the policy response (see Davis 1997c). This in turn will increase the scope of institutional investment via pension funds. Even in advance of

reforms, individuals in countries with generous pay-as-you-go systems are increasing their long-term saving via mutual funds and life insurers, owing to expectations of future difficulties and consequent reform, and are thereby already boosting the institutionalization of capital markets. Cross-country comparison using the data in table 1.6 indicate the enormous scope of pension fund asset accumulation that would be involved if Europe and Japan were to converge on U.S. levels of funded pension provision; mutual fund and life insurance growth would likely boost these figures further.

1.5.3.4 Saving Projections in the Light of Demographic Shifts

As regards **projections of saving** in the light of such patterns, focusing on Europe, Miles and Patel (1996) suggest that as long as the baby boom generation remains in the labor force, an increase in private saving should be expected in the European Union, building to a maximum of 2.5% in 2020, after which saving declines as individuals retire. This implies a continued high rate of institutional saving. The rise in private saving would, in the view of Miles and Patel, be more than enough to offset changes in government saving. This projection is based on a life cycle view of saving, whereby assets are accumulated over the working life and run down during retirement.⁴² Börsch-Supan (1996) comes to a conclusion similar to that of Miles and Patel for major OECD countries regarding the profile of private saving, taking into account different saving propensities of cohorts and population growth. However, he concludes that increases in governments' demand for funds arising from population aging will outstrip the rise in private saving after 2005.

Not all studies suggest that private saving will rise. Roseveare et al. (1996) assess two scenarios that differ in the size of the assumed negative effect of the dependency ratio on saving and in the question as to whether there is Ricardian equivalence (private sector saving to offset public sector dissaving). They see private saving as a proportion of GDP across all industrial countries falling 3–6 percentage points between 2000 and 2030, depending on the scenario, and national saving declining by 8–16 percentage points, given unchanged

42. In a separate paper, Miles (1996) notes that cross-sectional evidence of individual households appears to be inconsistent with the life cycle, as saving is rarely negative after retirement. But he considers that this is largely a measurement error problem, as the decline in value of pension assets is rarely allowed for in cross-sectional data. Hence the predictions based on the life cycle—of falls in aggregate saving as the population ages—remain robust.

pension policies and assuming a partial response of private saving to government dissaving. In France, net national saving is forecast to be negative in 2030 in both scenarios. Cutler et al. (1990a) and Heller and Sidgwick (1987) reach similar conclusions.

Masson and Tryon (1990) use the IMF's global econometric model MULTIMOD to assess the combined effect of future aging on private saving, public deficits, and overall production (where production is assumed to link to the labor supply, i.e., the size of population of working age times the participation ratio). Their model generates large decreases in national saving in Germany and Japan from 2000 onward, as both private and public sectors reduce their saving, while in France, Italy, and the United Kingdom, the net effect is positive, with increased private saving more than compensating for a rise in the fiscal deficit. The difference in private saving links to the differences in demographic profiles. (Note that the model includes endogenous tax increases rather than assuming fixed contribution rates.)

These various simulations suggest that there is a need for caution in assuming that demographic trends will always drive increased private saving. On the other hand, given the need for retirement income and the likelihood of pension reform in some countries, it is quite likely that the composition of saving will continue to shift in favor of institutional investors, even if the overall level were to decline. (This subject is discussed further in chapter 6.)

1.5.3.5 Nondemographic Aspects

A separate factor from demographics is **wealth accumulation**. As table 1.8 shows, household sector balance sheets have seen an increase in both assets and liabilities relative to GDP, while in all cases, net financial wealth has also increased relative to GDP. Within gross holdings, there has been a universal increase in asset holding via institutional investors (table 1.9). As wealth increases, households want an increasing share of their assets to be held in the form of long-term and higher-return and higher-risk instruments, as their liquidity needs can be catered for by a relatively small proportion of the portfolio. Even the latter may be in money market mutual funds if they are available and suitably competitive vis-à-vis bank deposits.

Owing to this change in wealth, the political climate has arguably become more investor-friendly. The increased number of wealthy individuals has changed the demand for financial services. Traditional banking services or products, while maintaining a strong position in liquidity provision, are not adequate for people who are

interested in diversification and maximization of return subject to risk in the context of long-term investments. The associated rise in demand for securities has entailed an increased importance of brokerage, fund management, and consultancy activities.

Conclusions

Institutional investors have grown strongly in the past few decades, as a consequence not only of the overall expansion of financial claims relative to GDP, but also of a boost in their share of total claims. This phenomenon can be traced to various supply and demand factors that have made institutions attractive to households. On the demand side, we have highlighted demographics and growing wealth. On the supply side, there is, *inter alia*, the ease of diversification, liquidity, improved corporate control, deregulation, ability to take advantage of technological developments, and enhanced competition, as well as fiscal inducements and the difficulties of social security pensions. It is argued that such underlying factors are best understood in light of the features of institutions and their expanding scope for fulfilling various functions of the financial sector. It is only at a certain stage in financial development that an institutional sector becomes feasible and these advantages come to the fore.

Whereas it is difficult to find the precise balance between the supply and demand factors in explaining growth of institutions to date, it is clearer that in the future, the key factor will be demographic change linked to difficulties of social security, which will likely lead to a vast further expansion of institutional investing. In this context, in many countries (notably in Continental Europe), future demographic pressures on pay-as-you-go social security are likely to lead governments to seek to stimulate further growth of private pensions as a substitute for social security. This could have a major effect on financial systems. For example, if France and Italy were to develop funded pension assets of the same value relative to GDP as in the United Kingdom, the sums involved would be over a trillion dollars. And following the example of countries such as Chile, Singapore, and Malaysia, developing countries also have considerable scope for development of pension funds. A preexisting level of development of capital markets and of administrative skills is needed.⁴³

43. See Davis (1998f).