PENSION FUNDS AND EUROPEAN FINANCIAL MARKETS[1]

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Introduction

Whereas funding of retirement income is most directly related to the development of pension funds, the broader growth of institutional investors such as mutual funds and life insurers may also link directly or indirectly to saving to meet income needs in retirement. In this paper, we show that institutional investor growth in Europe is an established trend, while pension fund growth in Europe is strong but unevenly distributed. Meanwhile, institutionalisation and EMU are combining to revolutionise EU financial markets, moving their structure and behaviour towards the Anglo Saxon paradigm. Some regulatory problems for EU pension fund investments remain unresolved – and pension reform options are not yet widely grasped despite coming difficulties of social security pensions. Finally, looking ahead, we show that important financial stability risks arise for EU retirement systems, particularly where reform is absent. This article summarises the results of a range of research and analysis by the author and others, which can be consulted in more detail in the underlying reference material.

1 Long term financial developments in Europe

A salient feature of European financial markets in recent years – as well as elsewhere in the G7 - has been growth of institutional investors (pension funds, mutual funds and life insurance companies) as a percentage of GDP (Table 1). Although part of the background to this has been sizeable growth in the overall financial sector (Table 2), there has also been a compositional shift towards intermediated claims (Table 3) and within this aggregate, to institutional investors as opposed to banks (Table 4), leading to a long-term institutionalisation of financial markets. Individuals have shifted away both from bank deposits and from direct holdings of securities into institutional investment. The large size of mutual funds and life insurance as well as pension funds are notable features of EU markets (Table 5).

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As in other financial markets, we can attribute the growth of institutions to a combination of supply and demand side factors (Davis and Steil 2001). Supply-side factors suggest that institutions have offered their services relatively more efficiently than banks and direct securities holdings, thus fulfilling the functions of the financial system more effectively, while demand-side factors imply households have enhanced requirements for the types of financial functions that institutional investors are able to fulfil. In more detail, relevant advantages of institutional investors on the supply side include the ease of diversification via institutional investors as well as the potential liquidity of claims, improved corporate control, benefits from deregulation, ability to take advantage of technological developments, and enhanced asset-manager competition, as well as fiscal inducements and the difficulties of social security pensions. On the demand side, one may highlight demographic aspects (notably funding of pensions and population ageing) and growing wealth. As noted above, pension funds are not the only institutional investors to benefit from ageing; particularly where funded pensions are less common, precautionary saving for retirement may occur via mutual funds and life insurance companies.

2 EU Pension Funds

Turning to European pension fund developments, long term growth is in prospect: whereas assets were Euro 2500 bn in 2000, forecasts suggest that it will be Euro 3500 bn in 2005 although this will mainly take place in countries where pension funds are already established. Meanwhile, reflecting deregulation and competition in asset management a long-term shift from bonds to equities is underway. Table 6 shows the current asset allocation of EU pension funds, which is much more equity based than even five years earlier. In our view, this pattern is unlikely to be reversed more than temporarily by the current bear market in shares (Davis 2003a).

EMU is likely to stimulate further pension reform and pension fund growth for a number of reasons. One is the “Stability Pact”, which will limit the fiscal deficits that may accompany unsustainable pay-as-you-go systems when population ageing takes place. Related to this are concerns of investors and rating agencies about long-term social security obligations in evaluating fiscal positions. EMU also facilitates of comparison between costs of running businesses in different euro area countries, which leads corporations to put pressure on governments to avoid excessive tax burdens from social security contributions, with an implicit threat to shift production.

Meanwhile, companies with book-reserve pension obligations are seeking a reduction in book-reserves to help improve their credit ratings in the growing euro area bond markets. EMU also improves conditions for existing pension funds; they benefit, for example, from a better risk return trade-off in pan-EMU markets than in narrow national markets, and an easing of the incidence of currency matching regulations that used to limit portfolio holdings to national assets and are now broadened to

the euro zone. Furthermore there is enhanced competition among asset managers owing to the shift in focus from domestic to euro-wide investment (discussed further below), transparency in comparing costs and the growth of passive management.

The impact of these trends on funding of pensions should not be exaggerated; as shown in Table 5, despite reforms in a number of countries, pension assets and related growth remain concentrated in countries such as the UK, Sweden, Netherlands and Denmark. Reforms that have taken place e.g. in Germany are modest owing to the small size of contributions and low take-up and will not generate a rapid build-up of assets; elsewhere (e.g. France) little reform is on horizon. On the other hand, as noted, the growth of life insurers and mutual funds in countries such as Germany and France may entail retirement saving as well as pension funds, either in formal systems or as precautionary saving. Looking ahead, the data in Table 5 also show that if countries currently dependent on pay-as-you-go developed pension fund and other institutional sectors comparable to the UK, institutional assets could grow by as much as 100% of EU GDP.

Although currency matching is no longer a major constraint on investment, many countries retain restrictive portfolio regulations in terms of asset allocation (for example, insisting on large proportions of government bonds), which hamper performance, see Table 7. Countries such as the UK, the Netherlands and Ireland are the exceptions, having the more appropriate “prudent person rules” which allow investment flexibility and higher returns (Davis 2002a); these are also those that already have large pension fund sectors. The Pension Funds (IORP) Directive should mitigate their effects (as discussed below).

Meanwhile, investment is still dominated by oligopolistic domestic banks, which benefit from control of distribution, reputation and banking-relationships with clients, and which charge relatively high fees owing to a lack of competition (also there are often hidden fees). Barriers to entry of markets in asset management, drawn from a survey reported in Davis and Steil (2001) are highlighted in Table 8, with control of distribution channels seen as a particularly important barrier. Besides these factors, lack of independent performance measurement may stand in the way of enhanced transparency and consequent cross-broader competition amongst asset managers. As shown in Table 9, in countries such as Spain, Italy and Portugal the asset managers benefit from high profitability, which is suggestive of market power. Fees in Ireland and the Netherlands suggest strong competition while Switzerland may suffer from oligopoly (Table 10).

3 Pension fund growth and the evolution of EU financial markets

In assessing the relation between pension funding and EU market developments now and in the coming years, it is important to consider pension fund and institutional investor growth in combination

with EMU, as generating a cumulative effect together beyond that which each would have viewed alone (Davis 1999). Both have effects, inter alia, of increasing the role of securities markets, boosting cross border investment, putting pressure on bank profitability, leading to concentration of trading activity and helping to shift corporate governance to Anglo-Saxon modes (hostile takeovers and direct pressure on firms by institutional investors).

We go through two examples of such interaction – corporate governance and trading - in more detail. Growth of institutional investors such as pension funds leads to a shift from modes of corporate governance based on primacy of banks (as creditors and shareholders) to primacy of institutional shareholders. Increased competition among banks after EMU may weaken "relationship banking" links and there is increased shareholder pressures on firms for adequate returns on equity in integrated EMU equity markets. Firms may seek to issue more equity in EMU to finance restructuring and increase robustness as banking links weaken, which will reinforce shareholder leverage. Meanwhile, institutional trading is willing to relocate and favours markets offering liquidity for large transactions. Institutions are less concerned with investor protection than retail investors, while EMU leads to potential for concentration of trading in a smaller number of exchanges.

Drawing on experience since 1999, there is already ample evidence of these intertwined pension fund and EMU effects on the structure and behaviour of EU capital markets. In the euro securities markets, we see a massive growth in corporate bond issuance, stimulated by institutional investor demand and the euro – and by low government deficits. There is also enhanced cross border investment, as witness the fact that domestic equity mandates for asset managers across Europe fell 60% over 1999-2001, and domestic bond mandates by 92% (Davis 2003b). Pension fund sectors are raising cross border investment, particularly in the euro zone, where currency risk ceases to hold. "Sectoral investment" and indexation are becoming key strategies therein, reducing further the competitive advantage of domestic managers In 1999-2000 41 of top asset managers operated in 5 or more countries, in 1996 it was only 17

As regards banks' profits, there is a continuing squeeze on profitability of banks in many EU countries, with narrowing interest margins, linked partly to competition from institutional saving, but also cross border competition as is facilitated by EMU, and the disintermediation of financing via bond markets. Universal banks such as Deutsche Bank are shifting to an investment banking and asset management focus, and disposing of equity holdings, thus reinforcing the development of institutional investors and securities markets as well as shifting away from relationship banking. Discussion of a "credit crunch" in Germany at the time of writing highlights the potential shift from relationship-based to transaction-based banking.

Trading activity is witnessing privatisation, mergers and prospective mergers of bourses, with growth of alternative trading systems, due to "footloose" nature of pension funds and other institutional investors' trading. EMU as predicted is facilitating such concentration of trading.

In terms of corporate governance, there has been a massive growth in merger activity in Continental Europe (Mannesmann, Olivetti, and Soc Gen-Paribas being key examples) where pension funds are major investors. Complementing this has been a growth in the share of equity in pension funds' portfolios. There are also increased direct corporate governance pressures on Continental firms (in terms of performance, shareholder rights, management structure). The foreign share of equities in some Continental markets is now quite high – in France foreigners held 20% of equities in 2000, and in Germany 16%. In this context, a strong effect on corporate governance is being exerted by US funds, whose foreign assets are over $800 bn. CALPERS, the Californian public fund in particular sets out corporate governance guidelines for international companies. Finally, book-reserve funding of pensions is in decline as firms seek to shift to external funding, owing to pressure on credit ratings, and facilitated by German tax reform.

Wider macroeconomic effects may accompany the ongoing shift to institutional investment in the EU, according to research detailed in Davis (2002b). Econometric analysis suggests that growth of domestic and foreign institutional investors' share of domestic corporate equity leads to higher dividends and productivity and lower investment than would otherwise be the case. Hence, besides enhancing shareholder value in terms of dividends, institutions improve economic efficiency via increased productivity, which may relate to pressure on company managers to maximise profits. The downward pressure on fixed investment need not be a negative aspect owing to the risk of wasteful investment of retained earnings where corporate governance is weak.

Given ageing of the population and accompanying growth in pension funds and other institutional investors, the effects set out above can only intensify in the future. Table 11 shows how the EU financial system would change if there were to be convergence with the US, using 1995 data. In terms of size, the sectors are comparable, but there would be major shifts in most EU countries away from banking and into securities and institutional investors. The shift would be even greater if there were to be convergence with the UK. The incidence and benefits of such changes would be subject to progress of pension reforms and an appropriate regulatory framework. It is to current EU regulatory issues that we now turn.

4 Regulatory issues for pension fund investment

The current Pension Funds (IORP) Directive has some good points (Davis 2001); it enshrines prudent person investment rules (necessary for optimal investment), and sets minimum limits of 70% equity

and 30% non-matching currencies. These rules should benefit not only pension funds but also EU financial markets. But it also allows countries to impose quantitative restrictions, which could constitute a loophole. In effect they could allow governments to directly or indirectly force pension funds to invest mainly in public bonds, counter to the interests of members. And it sets out a minimum funding aspect, which will be particularly strict for cross-border defined benefit funds and may discourage their development. In the Directive itself, there is no attempt to address vesting or taxation issues, which are major barriers to integration.

Tax barriers to cross border occupational pensions are indeed still a major problem for pan-European pension funds, even if the IORP Directive is implemented. A common basis for taxation (exempting contributions and asset returns, so-called EET), which is needed for pan-European pension schemes, is being sought by the Commission. Pan-EU funds are of course essential for efficiency of multinationals' pension arrangements. They are currently forced to have different administrative or even asset management arrangements in every member state. Progress in tax harmonisation is likely to be slow. On the other hand, the Danner ECJ case gives hope for progress in removal of tax discrimination for cross border sales of financial services such as life insurance.

Concerning the Directive on Takeovers, it is wholly undesirable that this has been emasculated, thus giving poor protection to minority shareholders such as pension funds and undue protection for incumbent management, and which will risk generating poor returns to beneficiaries. More recently there have been radical proposals from the Commission's Expert Group on a "squeeze-out" level at which share voting limitations could be overridden – this could be a promising way forward (ESFRC 2002) but faces strong opposition from the Nordic countries. A further issue is the proposed introduction of Basel 2 to European law. In the EU, unlike the US, Basel capital adequacy rules will also apply to asset managers as they are owned by banks. The initial proposal for "operational risk" capital requirements on asset managers of 20 basis points would have driven index managers owned by banks out of the EU.

Finally, barriers to competition among asset managers and institutional investors arise in domestic legislation in pension reforms and funded schemes. For example, German "Riester" pensions insist on use of investment funds based in the home market or with unique features hindering cross border sales (such as the minimum returns guarantee in Germany).

Although the above regulations are important to the further efficient development of pension funds in the EU, the most important policy aspect is pension reform itself. It is to this we now turn.

5 The ageing problem and EU pension reform

The issue of population ageing needs little expansion here. Suffice to say that there is expected to be a sharp increase in the proportion of the population aged 65 and over in the EU (Table 12). This increase is largely a consequence of a decline in fertility to below replacement in most EU countries (notably in Southern and Central Europe), although it also stems from an increase in average life expectancy and a low level of net migration. With an unchanged retirement age, such a demographic shift will naturally lead to an increase in the scope of transfers in the context of pay-as-you-go pension systems (Table 13). The problem is, however, compounded by the fact that social security pension promises even for higher earners are extremely generous in a number of EU countries, with, for example, the net social security replacement rates (pension/earnings at retirement) being typically more than 50% even for those on twice average earnings. The exceptions are Denmark, the Netherlands, Ireland and the UK, which are also the countries where pension funding is most developed.

Consequently, although some progress has been made, projections of social security pensions expenditure feature sharp and possibly unsustainable increases in such expenditure in a number of EU countries. As shown in Table 13, Dang et al (2001) of the OECD projected that with unchanged pension policies, the share of GDP accounted for by social security pension costs would be 13% or more in 2040, in all EU Member States except for Sweden, Ireland and the UK. These estimates may be a lower bound on future pension obligations, since the productivity estimates underlying the projections may be unduly high. Note that Austria is projected to have the highest level in 2040.

Recall that the “return” to funding is basically the return on financial assets times the passivity ratio (years of retirement divided by years at work) while the “return” to pay-as-you-go comprises the growth rate of average labour earnings times the dependency ratio (number of pensions divided by contributing workers) (Davis 1997). The data on asset returns in some EU and non-EU OECD countries as against growth in average earnings underpin the argument that funding should be expanded to complement pay-as-you-go (Table 14). In all cases the return on pension funds and a 50-50 mix of bonds and equities is higher than the growth of average earnings, even before demographics – which affect pay-as-you go more than funding - are taken into account.

Two alternative approaches can be discerned in considering pension reform. One is major root-and-branch pension reforms, which substantively change the system of pension provision from defined benefit to defined contribution, or vice versa, or from pay as you go to full funding, or vice versa (Schwartz and Demirguc Kunt 1999). The menu of choices includes first, introduction of mandatory personal defined contribution funds managed on decentralised basis by insurance companies (as in Latin America and Eastern Europe); second, use of mandatory personal defined contribution funds invested centrally by public bodies (Hong Kong, Singapore); third, mandatory occupational defined contribution funds (Australia, Switzerland)); and fourth, a shift to defined contribution pay-as-you-go (Sweden, Italy, Poland) with pension indexed to life expectancy. The appropriate model depends on

country circumstances (Davis 1998a). For EU countries, we see benefits to the Swiss-Australian model of defined contribution occupational schemes, given they charge lower fees than individual funds, offer more efficient investment than when the government takes charge (Davis 1998b), and give a major role for funding unlike the pay-as-you-go defined contribution schemes. There remain issues in defined contribution occupational funds in that the employers controlling asset allocation may not have incentives to optimise investment, given workers bear the risk.

The other option is so-called parametric reform. In terms of pay-as-you-go, this could include raising the retirement age; changing indexation rule; cutting the replacement ratio; increasing the contribution period; and more generally lowering incentives for early retirement. Early retirement is a particular issue in the EU, since labour force participation of older cohorts is much lower than in the US and Japan. Even merely obliging people to work up to the official retirement age would offer major benefits to the solvency of pay-as-you-go schemes. Cutting privileges for public employees and the disabled, and lower credits for higher education can also improve the situation for unfunded public pension schemes. A number of these avenues have been followed in EU countries in recent years, albeit in most cases without radically cutting the obligations of the pay-as-you-go systems. As regards funding, parametric reform could include easing of portfolio regulations, increased tax privileges, and allowing opting out of earnings related social security as in the UK and Japan, reducing the burden on the state. There could also be a "monopsony" of public sector buying asset management services on behalf of private individuals as in Sweden, which markedly reduces fees while allowing individuals to choose their preferred fund, and a reserve fund for pay-as-you-go as mooted in France. But the last-named reform is only beneficial if invested in private assets. Reserve funds invested in government bonds, as in the US and Japan, are virtually identical economically to pay-as-you-go.

A key issue in Europe is whether countries are willing to take sufficiently radical steps in major reform, which may be needed to avoid fiscal problems and financial instability when systems become unsustainable. It is to the future of pension systems and their implications for economic and financial stability that we now turn.

6 EU financial markets and pensions systems during ageing

Ageing – which is most acute in Europe among OECD countries - will generate sharp changes in quantities and prices in EU financial markets As discussed in Davis (2002c), a possible effect on financial stability can be traced for the "general case" of ageing, for countries where pay-as-you remains dominant and where funding is introduced. This is obviously of major interest to central banks. No system is likely to be unscathed, but issues are far more serious for pay-as-you-go.

Looking first at the general case of ageing, it may be anticipated that saving will rise in the next few years owing to the "baby boom generation" entering peak saving age. Then, like Japan in the 1980s and 1990s, the EU could face an external surplus and loss of competitiveness with currency appreciation, aggravated by home bias due to uncertainty on the part of pension funds. This may in turn generate excess liquidity and loose macroeconomic policies (with a structural surplus being mistaken for a cyclical one). In turn, this could generate a financial bubble (as already observed in Japan), whose deflation entails financial instability. Later, as baby boomers retire, there could be a balance of payments deficit, with currency crises accompanying banking crises. Spillovers to EMEs from this process could be envisaged, driven by flows from EU pension funds and other institutional investors.

Risks in pay-as-you-go may be best traced in the extreme case of no-reform. They will be attenuated to the extent that reform as outlined above takes place. One aspect is that the inevitable uncertainty about future pensions in unreformed systems will lead to heightened precautionary saving. If directed to banks, this may lead to underpricing of risk in domestic credit or international interbank markets, again as in Japan. Life insurers could invest in high yield bonds and property, and be vulnerable to credit cycles.

Turning to fiscal effects themselves, if there is tax finance when ageing occurs (i.e. a marked rise in contribution rates) there may be major economic difficulties generating credit losses and falls in asset prices, which are unlikely to be accurately anticipated. Underlying and accompanying these problems capital as well as labour could translocate from the country concerned. In the case of bond finance, (i.e. whereby governments run deficits when there is strain on pay-as-you-go systems), one may expect a sharp rise in long term interest rates, loss of credit rating of the government, crowding-out, and a recession. Hence major credit losses for lenders may arise (we note that most past fiscal crises as in Italy were with unliberalised banking systems and hence are not a sufficient prediction of likely consequences). In this context, the government's ability to recapitalise banks in difficulty would decline and ultimately there may be a fiscal-solvency crises, which could be contagious, "snowball" and give rise to a temptation to monetise, or leave EMU. The pension issue is arguably the most intractable one facing the single currency.

Despite being less marked than for pay-as-you-go, funding also may present some novel risks. As regards risks arising from institutional investors, a financial structure with a sizeable institutional sector should have strong stabilising properties, including accuracy of asset pricing, liquidity, transparency and marking to market ensuring early detection of solvency risk and distance from safety net reducing moral hazard. Furthermore, the corporate sector benefits from "multiple avenues of intermediation" whereby bond markets can provide a substitute source of funds when banking crises occur (Greenspan 1999, Davis 2001).

But some unfamiliar risks may arise in institutionalised and securitised financial systems about which regulators need to learn: One is extreme price volatility after a shift in expectations and asset allocations (such as the 1987 crash and ERM crisis). Another is a protracted collapse of market liquidity and issuance after similar portfolio shifts (as for Russia/LTCM). Both may involve a threat to EMEs, banks and the non financial sector, and possibly to institutions themselves given e.g. exposure to credit risk in real estate cycles.

There are also risks of asset price volatility arising from the process of asset accumulation and decumulation during ageing. Possible effects of institutional flows on equity market prices in 1990s have already been discerned (Shiller 1999). Bubbles in debt and property as well as equities are feasible in the future. In this context, EMEs are as noted vulnerable to destabilisation from institutional flows emanating from OECD countries. Finally there may be falls in asset prices during ageing, as shown in Chart 1 from Davis and Li (2003), which projects past relationships in the US between equity prices and demographic patterns over 1950-1999 into this century. After 2020 with ageing, equity prices are set to fall while bond yields rise. This may link to lower real returns on capital with a shrinking labour force; lower saving (as the peak saving cohort shrinks in the “baby bust” generation) affecting real interest rates or risk premium; and a switch from equities to bonds. Emerging market economies whose populations age later could in principle “buy” the shares and bonds decumulated in the OECD but may not be at a sufficient capacity to do so.

Conclusions

In conclusion, we have shown that pension fund growth and EMU are having a major effect on EU financial markets, moving them partly towards an Anglo-American system. Regulatory reforms are needed at EU level to facilitate funding, but more important, a major reform effort is needed at national level. There is a menu of reform options that need careful tailoring to national conditions. Upcoming financial risks linked to ageing underline the need to scale down pay-as-you-go, but be conscious of risks to funding. It is underlined that reforms should hence focus on creating a diversified system. Political and demographic risks of pay-as-you-go may balance the market risks of funding.

Bibliography

CEPS (2003), “Obstacles to Pan-European asset management”, Report of a Task Force, Centre for European Policy Studies, Brussels

Dang T T, Antolin P and Oxley H (2001), “Fiscal implications of ageing; projections of age-related spending”, Economics Department Working Paper No 305, OECD, Paris

Davis E P and Steil B (2001) “Institutional investors”, with Benn Steil, MIT Press

Davis E P (1997), "Repartition, capitalisation et securite des regimes de retraite", Economie Internationale, 72, 91-105

Davis E P (1998a), "Policy and implementation issues in reforming pension systems", Working Paper No. 31, European Bank for Reconstruction and Development, London

Davis E P (1998b), "Investment of mandatory funded pension schemes", in eds J Turner and D Latulippe "Funding of Social Security Pensions", International Labour Office.

Davis E P (1999) “Institutionalisation and EMU”, International Finance, 2, 33-61

Davis E P (2001a), “Presentation on the proposed Directive on Institutions for Occupational Retirement Provision” presented to the European Parliament Economic and Monetary Committee in February 2001, www.geocities.com/e_philip_davis/eu-pensions.htm

Davis E P (2001b), "Multiple avenues of intermediation, corporate finance and financial stability", Working Paper No. 01/115, International Monetary Fund, Washington DC

Davis E P (2002a), "Prudent person rules or quantitative restrictions? The regulation of long term institutional investors' portfolios", Journal of Pension Economics and Finance, 1, 157-191

Davis E P (2002b) “Institutional investors and corporate governance” forthcoming in Economic Systems

Davis E P (2002c) “Ageing and financial stability”, in eds H Herrmann and A Auerbach, "Ageing and Financial Markets", Springer Verlag - Deutsche Bundesbank

Davis E P (2003a), "Comparing bear markets, 1973 and 2000", National Institute Economic Review, 183, 78-89

Davis E P (2003b) “The European pension management industry” forthcoming in Revue d’economie financiere

Davis E P and Li C (2003) “Demographics and asset prices”, Brunel University Working Paper

Demirguc Kunt A and Schwarz A (1999), “Taking stock of pension reforms around the world”, World Bank Social Protection Discussion Paper No 9917

ESFRC (2002), “Takeover Bids in Europe” Statement Number 13 of the European Shadow Financial Regulatory Committee, presented 4th February 2002 in Copenhagen

McKinsey (2000), “Asset management in Europe”, The McKinsey Quarterly, 2000 Number 2: Europe, 8-11

Shiller R (1999), “Irrational exuberance”, Princeton University Press

Watson Wyatt (2000), “Global investment review 2000”, Watson Wyatt Co.

Table 1: Institutional Investor Claims As A Proportion Of GDP

	1970	1980	1990	2000	Change 1970–2000
United Kingdom	0.42	0.37	1.02	1.93	1.51
United States	0.41	0.47	0.79	1.62	1.21
Germany	0.12	0.20	0.33	0.84	0.71
Japan	0.15	0.21	0.58	1.03	0.88
Canada	0.32	0.32	0.52	1.10	0.79
France	0.07	0.12	0.52	1.20	1.13
Italy	0.07	0.06	0.15	0.76	0.69
G7	**0.23**	**0.25**	**0.56**	**1.21**	**0.99**
Anglo-Saxon	**0.39**	**0.39**	**0.78**	**1.55**	**1.17**
Europe and Japan	**0.11**	**0.15**	**0.40**	**0.96**	**0.85**

Source: National Flow of Funds Balance Sheets

Table 2: Size Indicator Of Financial Structure (Total Financial Claims As A Proportion Of GDP)

	1970	1980	1990	2000	Change 1970–2000
United Kingdom	4.7	4.9	8.9	11.0	6.2
United Kingdom excluding Euromarkets	4.7	4.2	7.9	9.7	5.0
United States	4.1	4.1	5.9	8.4	4.4
Germany	2.9	3.6	4.7	7.9	5.0
Japan	3.8	5.1	8.5	11.9	8.1
Canada	4.7	5.1	5.8	6.6	2.0
France	4.4	4.8	6.9	11.4	7.0
Italy	3.4	3.9	4.3	7.1	3.7
G7	**4.0**	**4.4**	**6.3**	**9.0**	**5.0**

Source: National Flow of Funds Balance Sheets

Table 3: Financial Intermediation Ratios (Intermediated Claims as a Proportion of the Total)

	1970	1980	1990	2000	Change 1970–2000
United Kingdom	0.32	0.42	0.47	0.58	0.26
United Kingdom excluding Euromarkets	0.32	0.34	0.40	0.52	0.20
United States	0.33	0.37	0.34	0.44	0.11
Germany	0.44	0.45	0.43	0.45	0.01
Japan	0.39	0.42	0.42	0.52	0.14
Canada	0.29	0.34	0.37	0.47	0.18
France	0.34	0.62	0.41	0.39	0.05
Italy	0.36	0.32	0.31	0.35	-0.01
G-7	**0.35**	**0.41**	**0.38**	**0.45**	0.10

Source: National Flow of Funds Balance Sheets

Table 4: Bank And Institutional Intermediation Ratios (Proportion Of Intermediated Claims Held By Banks And Institutional Investors)

		1970	1980	1990	2000	Change 1970–2000
United Kingdom	Bank	0.58	0.64	0.55	0.44	-0.13
	Institutional	0.28	0.26	0.32	0.38	0.10
United States	Bank	0.58	0.58	0.42	0.21	-0.37
	Institutional	0.31	0.31	0.40	0.44	0.13
Germany	Bank	0.84	0.86	0.83	0.73	-0.12
	Institutional	0.10	0.12	0.17	0.23	0.14
Japan	Bank	0.45	0.36	0.38	0.24	-0.21
	Institutional	0.10	0.10	0.16	0.17	0.06
Canada	Bank	0.45	0.55	0.44	0.38	-0.07
	Institutional	0.23	0.19	0.25	0.35	0.12
France	Bank	0.94	0.68	0.82	0.65	-0.29
	Institutional	0.05	0.04	0.19	0.27	0.22
Italy	Bank	0.98	0.98	0.95	0.64	-0.34
	Institutional	0.06	0.05	0.11	0.31	0.25
G7	**Bank**	**0.69**	**0.66**	**0.63**	**0.47**	**-0.22**
	Institutional	**0.16**	**0.15**	**0.23**	**0.31**	**0.15**

Source: National Flow of Funds Balance Sheets

Table 5: Relative size of EU institutional sectors, 2000

Percent of GDP	Pension funds	Investment funds	Insurance
Belgium	6	30	42
Denmark	24	20	78
Germany	16	12	43
Greece	4	25	1
Spain	7	30	13
France	7	55	61
Ireland	51	144	45
Italy	3	39	21
Luxembourg	1	3867	117
Netherlands	111	25	65
Austria	12	40	24
Portugal	12	16	20
Finland	9	10	57
Sweden	57	34	90
UK	81	27	107

Source: CEPS (2003)

Table 6 European pension fund asset allocation 2000

Countries	Equity	Fixed Income	Real Estate	Cash & STP	Other	Unallocated Assets
Belgium	49.9	40.4	3.9	4.3	1.7	0.0
Denmark	32.4	47.9	4.4	1.7	13.7	0.0
Germany	6.6	12.7	1.2	0.3	0.0	79.3
Greece	12.2	54.6	7.7	25.5	0.0	0.0
Spain	12.5	36.1	2.7	11.1	7.2	30.4
France	14.8	34.7	4.0	1.3	1.1	44.0
Ireland	64.4	22.1	6.6	4.5	2.4	0.0
Italy	4.9	30.6	10.9	1.0	29.8	22.8
Luxembourg	27.4	48.5	0.2	23.8	0.0	0.0
Netherlands	42.0	47.0	10.1	0.9	0.0	0.0
Austria	9.7	19.4	0.3	1.3	1.6	67.6
Portugal	29.3	48.4	7.3	11.0	3.9	0.0
Finland	39.0	38.1	13.6	9.3	0.0	0.0
Sweden	34.0	42.2	6.2	0.6	0.1	16.9
UK	71.0	21.0	3.0	5.0	0.0	0.0
EU15	47.8	27.0	4.4	3.2	0.8	16.8
Switzerland	25.4	47.8	13.2	9.2	4.5	0.0

Source: European Federation for Retirement Provision

Table 7 Portfolio restrictions on EU and Swiss pension funds

Belgium	>15% in government bonds
Denmark	rules of the EU's 3rd life insurance directive, 80% currency matching
France	>50% EU government bonds
Germany	<35% EU equities, <25% EU property, <6% non-EU equities, <6% non-EU bonds, <20% overall foreign assets, >70% currency matching
Italy	<20% liquid assets, <50% non-listed OECD securities, <5% non-OECD securities, >30% currency matching
Portugal	<40% in foreign equity
Switzerland	<50% real estate, <30% Swiss equities, <30% foreign loans, <25% foreign equities

Source: CEPS (2003); rules for Germany refer to insurance companies and pensionskassen; new legislation has recently introduced the prudent man rule for a new type of pension funds.

Table 8 Asset manager competition – barriers to entry of markets

Answers Ranked from 1 (Unimportant) to 5 (Very Important)	**5**	**4**	**3**	**2**	**1**	**Mean**	**% response**
Reputation of existing firms	20	48	20	2	11	3.63	64
Existing firms' relationships with clients	29	38	18	4	11	3.69	64
Existing firms' distribution channels/selling networks	40	36	13	0	11	3.93	64
Existing firms' expertise/technical capabilities	7	33	35	13	13	3.07	64
Existing firms' lower unit costs	7	7	50	17	16	2.48	61
Capital or marketing costs	4	28	43	13	13	2.98	63
Existing firms' local information	15	38	28	6	13	3.36	65
Established investor preferences	11	38	34	9	9	3.34	65
Regulatory barriers	13	24	31	18	13	3.07	63
Other (please specify)							

Source: Davis and Steil (2001)

Table 9 European asset manager performance

	Operating profits	Net revenues	Total costs	Memo: % retail funds	Memo: equity fund management costs (bp)
Benelux	19	32	13	53	4.6
France	19	32	13	40	5.7
Germany	9	23	14	31	5.7
Iberia	42	53	11	74	3.7
Italy	35	48	13	94	5.8
UK	11	28	17	21	5.8

Source: McKinsey (2000)

Table 10 Fees for a $100 mn balanced mandate

	Fees (basis points)
Ireland	18
Netherlands	18
Germany	27
UK	27
France	32
Switzerland	40
Memo: US	46

Source: Watson Wyatt (2000)

Table 11 Convergence of EU financial structure on the US? ($ BILLION/% OF GDP)

	Equities (Market Cap)	Percent of GDP	Government Bonds	Percent of GDP	Private Bonds	Per cent of GDP	Bank Assets	Percent of GDP	Total	Percent of GDP P	Institutional Investors	Percent of GDP
E.U.-15	5093	62	3298	40	1963	24	–11695	–134	–1223	–14	5962	71
E.U.-11	5733	82	2846	41	1828	26	–9246	–133	0	0	5890	86
Belgium	173	69	–42	–17	15	6	–657	–253	–522	–201	234	87
Denmark	127	75	46	27	–73	–43	–65	–36	32	18	135	78
Germany	2024	88	1253	57	315	14	–2893	–127	433	19	2395	99
Greece	104	95	7	6	59	60	–15	–12	173	143	N.A.	N.A.
Spain	528	80	353	53	341	53	–554	–99	320	57	605	107
France	1278	80	802	51	382	24	–2235	–132	271	16	1082	70
Ireland	41	63	35	53	19	57	–113	–156	9	13	N.A.	N.A.
Italy	1004	93	–247	–23	249	23	–1173	–96	49	4	1394	125
Luxembourg	–12	–64	15	90	0	–1	–590	–3552	–592	–3566	–341	–1797
Netherlands	51	14	146	40	154	42	–498	–131	–171	–45	–52	–13
Austria	224	102	131	61	58	27	–354	–160	38	17	258	110
Portugal	79	89	40	45	36	40	–149	–139	41	38	114	111
Finland	74	64	59	50	33	28	–45	–37	121	98	120	95
Sweden	50	20	90	36	–13	–5	–79	–32	–2	–1	67	29
United Kingdom	–344	–29	723	60	504	42	–2267	–180	–1399	–111	–188	–17

Source: Davis and Steil (2001) N/A = not applicable.

Table 12 Projections of elderly dependency ratio

	2000	2020	2040
Belgium	28.1	35.6	51.3
Denmark	24.1	33.7	44.5
German	26.0	36.3	54.7
Greece	28.3	35.8	51.4
Spain	27.1	33.1	55.7
France	27.2	35.9	50.0
Ireland	19.4	24.5	36.0
Italy	28.8	39.7	63.9
Luxembourg	23.4	31.0	45.4
Netherlands	21.9	32.6	48.1
Austria	25.1	32.4	54.5
Portugal	25.1	30.3	43.1
Finland	24.5	38.9	47.4
Sweden	29.6	37.6	46.7
UK	26.4	32.0	47.0

Source: Bos et al (1994)

Table 13 Projected pension costs

Percent of GDP	2000	2020	2040	Change to peak	Memo: Replace-ment rate*
Belgium	9.3	10.4	13.0	3.7	58-45
Denmark	10.2	14.0	13.9	4.5	45-43
Germany	10.3	10.6	14.4	4.3	93-37
Greece	na	na	na	Na	70-48
Spain	9.4	10.2	16.3	8.3	94-63
France	12.1	15.0	15.8	3.9	67-51
Ireland	4.6	6.7	8.3	4.4	53-21
Italy	14.2	14.9	15.7	1.7	78-75
Luxembourg	na	na	na	na	87-76
Netherlands	7.9	11.1	14.1	6.2	76-31
Austria	14.5	15.7	17.0	3.1	70-70
Portugal	9.8	14.4	15.8	6.2	74-74
Finland	11.3	140	16.0	4.7	60-59
Sweden	9.0	10.2	10.7	1.7	63-50
UK	5.1	4.4	4.4	0.0	60-33

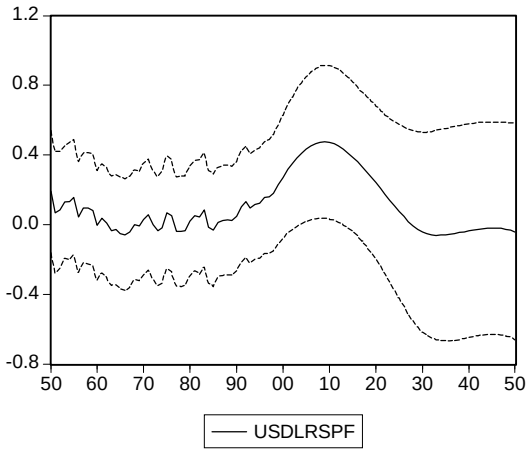
Source: Dang et al (2001)

Table 14: Returns to funding and pay-as-you-go

1970-95	Real Returns/ Risk	50–50 Bond Equity	Global Portfolio	Real Average Earnings
Australia	1.8	3.5	6.1	1.0
	(11.4)	(17.5)	(18.2)	(3.4)
Canada	4.8	4.0	7.1	1.3
	(10.0)	(12.1)	(14.7)	(2.4)
Denmark	5.0	6.1	3.7	2.4
	(11.1)	(19.0)	(18.5)	(3.5)
Germany	6.0	6.4	3.9	2.7
	(5.9)	(17.7)	(18.4)	(2.7)
Japan	4.4	6.1	6.9	2.4
	(10.2)	(16.9)	(16.0)	(3.0)
Netherlands	4.6	5.5	4.8	1.4
	(6.0)	(18.3)	(14.7)	(2.6)
Sweden	2.0	8.0	6.3	1.4
	(13.1)	(20.1)	(14.8)	(3.5)
Switzerland	1.7	2.4	3.7	1.5
	(7.5)	(18.1)	(17.0)	(2.1)
United Kingdom	5.9	4.7	5.9	2.8
	(12.8)	(15.4)	(15.0)	(2.3)
United States	4.5	4.4	7.5	–0.2
	(11.8)	(13.3)	(15.2)	(1.9)

Source: Davis (2002a)

Chart 1: Expected US asset prices applying projected US demographics



Source: Davis and Li (2003)
Dashed lines show 95% confidence interval