Irish Pension Funds:

Size, Growth, and Composition of Assets

A research report prepared for the

Irish Association of Pension Funds

by

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Introduction

Provident saving, whether for retirement or otherwise, is termed a superior good by economists because the proportion of income committed to saving tends to increase with rising incomes. This entails that national savings should grow at a faster rate than national income in good times. The stock of savings can be expected to increase even more rapidly, under the combined influence of the rising net saving level and the performance of the underlying assets, and this has been readily observed in the world over the last decade or so. Financial assets managed by long-term institutional investors in the OECD countries increased from US$13.5 trillion at the end of 1990 to US$30.6 trillion at the end of 1998 – a growth rate of 11% p.a.[1], considerably higher than nominal GNP growth of the world economy. Ireland is the only OECD country that does not participate in this survey but it is possible to piece together a picture of the growth of investible funds in Ireland from several other sources. The Irish Association of Investment Managers (IAIM), for instance, has conducted an annual survey of the principal Irish long-term investing institutions since 1995 and they report an increase of funds under management of 17% p.a. (from IR£26.560 billion to IR£59.095 billion) between the end of 1995 and the end of 2000.[2] Of this sum, moneys in respect of pensions represent 64% of all such long term savings in Ireland and the trend, evident over the last 5 years, is for Irish pension assets to grow at a faster rate than other forms of savings with pension money increasing as a share of total long-term savings from 57% at the end of 1995 to 64% by end 2000.

Irish pension money managed by Irish financial institutions amounted to IR£38.0 billion at the end of 2000 according to IAIM. A somewhat more complete estimate of Irish pension assets as it includes assets managed by non-Irish financial institutions has been made annually by the Irish Association of Pension Funds (IAPF) since 1987 and they put the value of Irish pension assets at IR£41.4 billion at the end of 2000. This survey, while being the most complete available, inevitably misses out some schemes and some scheme assets, an understatement that was last estimated (in 1989) at about 5% of total assets.

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[1] Figures are from the OECD's *Institutional Investors, Statistical Yearbook 2000.* The institutional investors surveyed comprise pension funds, insurance companies, investment companies (i.e., unit trusts and investment trusts), and others (e.g., charitable foundations and endowments).

[2] The annual survey, *Assets Under Management*, is available at www.iaim.ie. The figures quoted relate to assets managed by Irish institutions on behalf of Irish residents (this represents just under 40% of the assets managed by such institutions at the end of 2000).

The annual surveys of the IAPF provide therefore a unique guide to the evolution of the greater part of Irish long term savings. Over the 14 years they have been conducted, they chronicle the growth, the composition between the principal modes of investment (segregated, unitised, insured) and, crucially, how the assets have been invested around the world's capital markets. This latter part of the survey is perhaps its most interesting aspect as the asset allocation of pension funds is the key determinant of their performance.

The asset allocation of Irish pension funds also has an important macroeconomic dimension as such funds now represent almost two-thirds of the long-term mobile capital in Ireland. The size of the accumulated funds, now in excess of the national debt, have not avoided the attention of policymakers. Throughout most of the 1980s exchange controls limited the extent of new overseas investments and, though subsequently dismantled, forms of moral suasion where then used to encourage pension funds to invest more in Ireland. Such attempts, as we shall see, proved ineffectual: two-thirds of Irish pension assets were invested in overseas securities at the end of 2000, up from one quarter a decade earlier.

This report reviews the trends in Irish pension assets over the last decade or two. It chronicles their growth, composition, performance, and highlights their national importance. A comparison is made of pension assets in Ireland with those in other economies. The prime source for Ireland is the annual IAPF surveys but recourse is had to other studies to confirm and elaborate on its findings.

The second part of the report considers the attempts over the last couple of decades to affect the asset distribution of such funds, in particular the various attempts to arrest the trend away from Irish assets. In this context, Irish pension funds are just the current dominant long-term investors and, as we shall see, they are inheriting a very long trend of net investment abroad. Why don't Irish investors invest more in Ireland? This question goes very deep and with every recession is debated more hotly. But the debate is centuries old and several commentators have made valuable contributions. We shall briefly review the state of this debate.

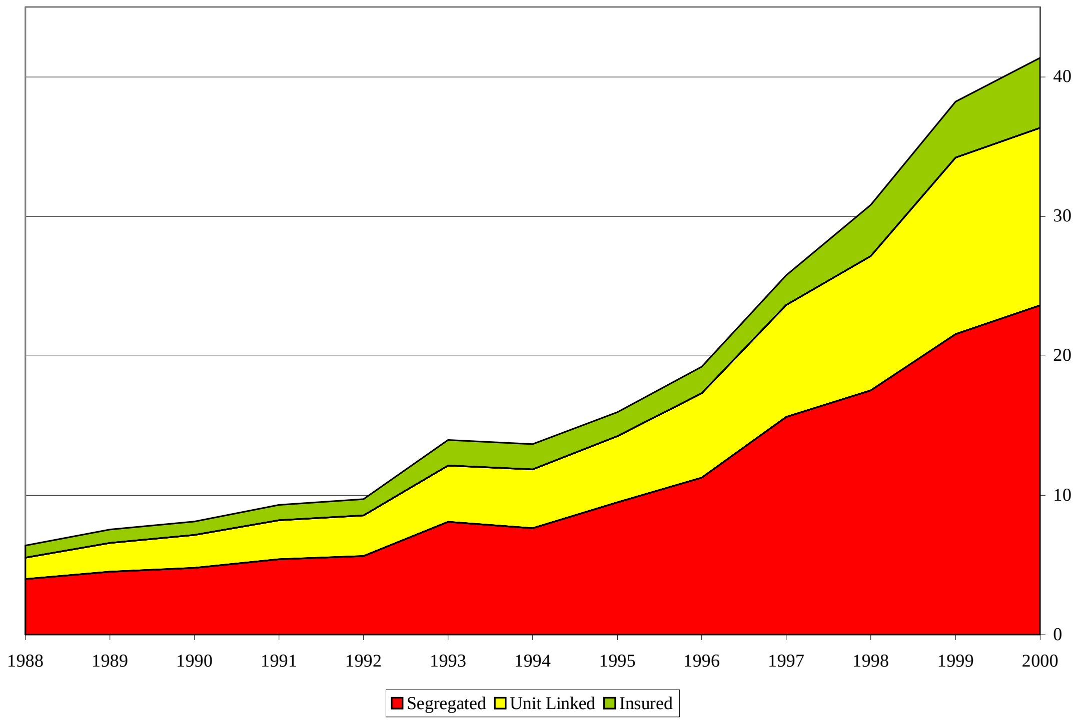
The layout of this report is as follows:

1. Size, Growth & Composition of Irish Pension Assets

1.1 Size & Growth

The IAPF Survey at the end of 2000 puts the size of Irish pension assets at IR£41.4 billion. This amount exceeds the expenditure by individuals on goods and services in Ireland in 2000 (IR£39.9 billion), is almost double the size of the national debt (IR£23.2 billion at the end of 2000) and represented 60% of Irish GNP in 2000. In terms of Irish financial markets, Irish pension funds are over twice the size of the Irish gilt market (IR£16.3 billion at end of 2000) and two-thirds the size of the Irish equity market (as measured by the capitalisation of the Irish Stock Exchange Equity Index of IR£62.9 billion at the end of 2000).[3]

Figure 1: Growth in Irish Pension Assets, overall and by each investment vehicle, 1988-2000 (IR£ billions)



Source: IAPF Annual Surveys, 1988-2000.

Prior to the annual IAPF survey there were ad hoc investigations into the size and structure of Irish pension assets such as that by Keogh & Whelan (1985), Bristow & Ryan (1985) or those

[3] An appreciation of the absolute magnitude of their size can be gleaned by the less conventional yardstick that it would take a clerk over 260 years, counting every day of the year, 24 hours a day, at the rate of five pounds a second to count out IR£41.4 billion pounds.

previously undertaken by the IAPF itself. A useful summary of such work is given in OECD (1994). For instance in 1983 the size of Irish pension assets amounted to about IR£2.3 billion (that is the average of the estimate of IR£2.4 billion by Bristow & Ryan (1985) and IR£2.2 billion by Keogh & Whelan (1985)) which was just 17% of GNP at that time.

Irish pension funds have grown very rapidly – dwarfing the growth of the Irish economy over the last few decades. From 1975 to 1989 pension fund assets grew at an average rate of 32% per annum (OECD (1994, p. 44) or about 20% p.a. in real terms. From 1989 to 2000, the nominal growth rate has halved to about 17% p.a. (Table 1 later), or in real terms was about 14% p.a. The average real growth rate of pension assets has therefore been 17% p.a. over a quarter of a century. Irish pension assets have grown from being a relatively insignificant savings medium in 1975 to now being the dominant form of long-term savings in Ireland.

1.2 Sources of Growth

The growth of pension assets can be attributed to a number of underlying factors. First, it can be decomposed into either that arising from net new money flows into pension schemes or into that due to the performance of the underlying investments. The new money flow into pension schemes can further be attributed to contributions on behalf of existing members or that due to an overall growth in membership of schemes.

IAPF surveys in the years 1988 to 1996 give a breakdown of asset growth between that arising from net new money paid into schemes over the year and that due to performance of the underlying investments. This decomposition is not available for later years. Between 1989 and 1996 there was, of course, an upward trend in the net new money flows from IR£298 million in 1989 to IR£895 million in 1996. When the net new money flow is related to the size of the assets at the start of the year a more stable picture emerges. New money flow averaged 4.4% of the value of assets at the start of each year, a figure that varied between a low of 3.5% and a high of 5.6%. It is reasonable then to suggest that one-quarter of the growth of pension assets over the last decade or so is due to net new money (i.e., 4.4% of the total growth of 17% p.a.), and that the remainder of the growth is due to performance of the underlying investments.

We can check the attribution above by comparing the implied performance figure with the actual performance of Irish pension funds. The Combined Performance Measurement Service (CPMS) has tracked the performance of a large universe of pension funds over almost two decades. At the end of 2000, they reported on the performance of 210 of the largest schemes in Ireland with a total value of IR£22.6 billion (i.e., roughly half of Irish pension assets).[4] From 1989 to 2000 the median performance of pension funds in their survey was 13.0% p.a., supporting our earlier apportionment. Appendix V sets out the median performance of Irish pension schemes each year since 1989.

So just 4-5% p.a. of the growth of pension fund assets can be attributable to net contribution inflows. This relatively modest figure suggests that the growth in scheme assets has not been accompanied by a significant growth in scheme membership and this is borne out by the annual surveys of pension scheme membership by The Pensions Board (see Annual Reports of The Pension Board, 1991-2000).

1.3 International Comparison

A comprehensive study by the World Bank into international patterns in pension provision ranks Irish occupational pension assets as a percentage of GDP 7th largest out of the 43 countries studied.[5] This is all the more remarkable given that Ireland's population is not as aged as that of most other developed economies. In a recent qualitative review of European pension system, focusing on their adequacy and stability, Ireland scores top of the 13 European countries studied.[6] Of the many indicators used to rate countries, Ireland scored particularly well on the high level of pre-funding of future commitments and also on the adequacy of pension provision as Irish pensioners had the highest relative living standard (measured as relative income of those over 65 relative to the whole population).

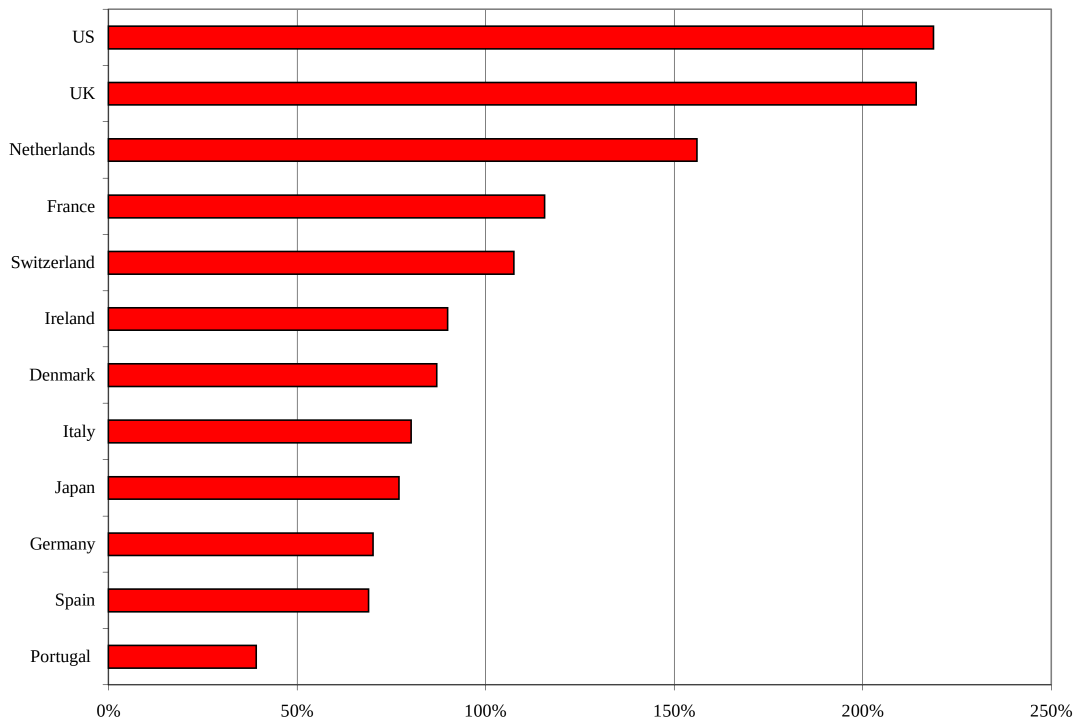
The recent initiative to start pre-funding public service and state pension liabilities, the National Pensions Reserve Fund, will further flatter Ireland in international comparisons in years to come. Indeed, the initial amount of just over IR£5 billion used to kick-start the Fund already amortised the equivalent of about one-quarter of the accrued liabilities in respect of

[4] CPMS (2001), *Fund Manager Report to End 2000*.
[5] Palacios & Pallares-Miralles (2000).
[6] Merrill Lynch (2001).

public service pensions (estimated at about IR£19 billion in 1997)[7] and the annual commitment of 1% of GNP (about R£700 million) will make further significant inroads in the years to come. The National Pensions Reserve Fund is already one-eighth the total size of assets of private pension schemes and its contribution income bears comparison with the IR£895 million net new cashflow into private schemes when last surveyed in 1996.

It has been argued in Hughes (2000) that the above comparisons of pension assets between economies tell only part of the story. In many countries, Ireland included, saving via pensions tends to dominate other savings media due to taxation incentives and freedom from excessive regulation. The point made in Hughes (2000) is that there is surprisingly little direct evidence that taxation incentives lead to an overall increase in the savings rate; such incentives might simply be rearranging the existing level of saving into a different pattern within an economy. Viewed in this light, comparing pension savings only between one economy and another is a little spurious: one really should compare total savings. The graph below attempts to do this, with total Irish financial savings managed by Irish institutions (as a percentage of the size of the economy) compared with other economies at the end of 1998.

Figure 2: Total Institutional Savings, as a % of GDP (for Ireland as % of GNP) End 1998



[7] McAleese *et al.* (2000), p.164.

Sources: For Ireland, IAIM Annual Survey for End 1998 of assets managed for Irish residents by Irish long-term investing institutions divided by Irish GNP otherwise *Institutional Investors Statistical Yearbook, 2000 Edition* OECD, p. 26.

In this snapshot, we find the quantum of pension and other long-term savings in Ireland less remarkable. It ranks Ireland in the middle of the pack of wealthy nations. However, there are some important positives to having the structure of savings largely in pensions that are ignored in the above broad argument. First, pensions when paid are taxed as earned income, which is currently taxed at a higher rate than capital gains – this entails that the State has a greater financial interest in these savings than in other forms. The point is well made in a recent report by Merrill Lynch

> ‘These [Irish] pension assets, almost 60% of GDP [at end of 1999], will generate future tax revenues at exactly the same time as the public retirement system (pillar one) will start to feel the negative influence of an ageing population.’
>
> Merrill Lynch (2001), pp. 6-7.

Second, pension money is all declared and easily tracked within the current taxation and financial system, limiting the potential for tax fraud – an important practical consideration as money can be otherwise footloose. Third the draw-down of pension assets tends to be smooth, aiding macro-stability, and timely, as it is replaces earnings that would otherwise cease. Finally, savings being primarily in the form of pension saving may indicate a greater spread of savings within an economy as the limit for any one individual is ultimately a multiple of salary.[8]

In summary, Irish pension assets appear relatively large in an international context and this comparison will become more favourable in the future when assets of the recently established National Pensions Reserve Fund are included in the count. More generally, the overall level of long-term savings in Ireland places Ireland comfortably in the middle of the league table of wealthy nations. We can conclude that Ireland has a reasonably provident society, especially so in pension provision.

1.4 Composition of Pension Assets

[8] Typically, the majority of financial assets in an economy are held by a small minority. In the US, for instance, the market for household's financial savings can be divided neatly into 2.8 million millionaires controlling US$10 trillion in assets and the 100.7 million others who between them control the remaining US$9.6 trillion in financial assets (source: *Bernstein Research (2000)*).

Pension assets can be sub-divided either by how they are invested or in what they are invested. The table below sets out the total of pension assets over the last 14 years and decomposes the total by the investment vehicle used.

Table 1: Irish Pension Fund Assets with Proportion Segregated, Unitised or in Insured Arrangements, 1987-2000

Year	Total Assets (IR£ m)	Segregated	Unit Linked	Insured
2000	41,375	57.1%	30.8%	12.2%
1999	39,601	54.7%	32.2%	13.1%
1998	30,800	56.9%	31.3%	11.8%
1997	25,763	60.6%	31.1%	8.3%
1996	19,208	58.7%	31.5%	9.9%
1995	15,957	59.4%	29.8%	10.8%
1994	13,661	55.9%	30.9%	13.2%
1993	13,937	58.0%	29.0%	13.0%
1992	9,737	58.0%	29.9%	12.1%
1991	9,303	58.1%	29.9%	12.0%
1990	8,095	59.1%	29.2%	11.7%
1989	7,539	59.7%	27.5%	12.8%
1988	6,390	62.2%	24.4%	13.5%
1987	5,527	n/a	n/a	n/a

Source: IAPF Annual Investment Surveys.

The proportions invested by the three different methods tend to have been reasonably stable over time with about 58% being segregated, 30% unitised, and 12% insured.

A more interesting way to subdivide pension assets is into the proportion invested in each asset class, as this is the key determinant in the overall performance of the investments. Table 3 below decomposes pension assets into the major asset classes for various years since 1983.

Table 2: Distribution of Irish Pension Asset, Various Years, 1983-2000.

	2000	1997	1995	1993	1990	1987	1983
Fixed Interest & Index-linked	22.2	27.1	30.7	34.8	38.4	46.1	33.7
Irish Equities	18.9	26.7	23.4	22.6	25.3	24.1	14.6
International Equities	45.4	31.9	35.0	33.9	20.4	14.8	22.4
Property & Forestry	6.6	6.0	7.0	5.4	10.0	7.0	18.8
Cash & Other	6.8	8.3	3.9	3.3	5.9	8.0	10.4
Total Irish	35.2	60.4	61.1	61.9	74.6	81.3	73.4
Total Non-Irish	64.8	39.6	38.9	38.1	25.4	18.7	26.6

Sources: 1990-2000, IAPF Surveys; 1987 calculated from the IAPF Survey and Table 30 in OECD (1994); 1983 calculated from figures of Bristow & Ryan (1985) in Table 29 of OECD (1994).

Two pronounced trends are evident. First, the proportion invested in Irish assets has fallen dramatically over the period, most of the fall occurring in the last three years. From almost three-quarters invested in Ireland back in 1983 or even as late as 1990, there is now only one third in Irish assets. The second trend is for the exposure to international equities to increase at the expense primarily of fixed interest and Irish equities. As we shall see on further analysis below, these two trends are, in reality, one. In the 1980s there was a marked decrease in the exposure of Irish pension funds to the domestic property market.

Appendix I, in describing the manner in which the IAPF survey is conducted, suggests that any incompleteness in the survey might distort inferences about the typical asset distribution. As a check on the accuracy of the IAPF survey in this regard, we compare the asset distribution of segregated and unit-linked schemes combined from the IAPF survey with the average distribution in the CPMS survey (which consists of the largest segregated and unitised schemes). This latter study collects data on a scheme-by-scheme basis so the average is not so sensitive to incompleteness.

Table 3: Comparing Year End Distributions, IAPF Survey (Segregated & Unit-Linked) with CPMS Universe

Sector	2000 (%)		1995 (%)		1990 (%)	
	IAPF	CPMS	IAPF	CPMS	IAPF	CPMS
Fixed Interest & Index-linked	18.0	18.5	22.1	19.8	30.2	30.5
Irish Equities	19.2	19.7	26.0	25.2	28.6	26.6
International Equities	48.7	50.0	39.7	45.4	23.1	25.3
Property & Forestry	7.0	8.1	8.0	6.8	11.3	9.6
Cash & Other	7.1	3.7	4.2	2.8	6.8	8.0
Total Irish	34.6	34.0	56.0	48.8	71.8	69.7
Total Non-Irish	65.4	66.0	44.0	51.2	28.2	30.3

Sources: IAPF Annual Surveys and CPMS Fund Manager Report 2001.

The table highlights some differences – plus or minus 2% on average. However in 1995, CPMS records a higher international content by 5.7%, which has a knock-on effect to the Irish/international split. The CPMS universe has international equities roughly 5% higher in the period 1991-1995 but thereafter there is generally a close agreement. Therefore, both agree as to the extent of the significant shift in the asset allocation but there is some minor dispute over its timing.

If we take 1990 as the basis of comparison, then the movements in the asset distribution of Irish pension schemes can be summarised as follows:

Table 4:Change in Distribution of Irish Pension Assets in Last Decade (All Pension Assets)

	2000 (%)	1990 (%)	Change (%)
Fixed Interest & Index-linked	22.2	38.4	-16.2
Irish Equities	18.9	25.3	-6.4
International Equities	45.4	20.4	+25.0
Property & Forestry	6.6	10.0	-3.4
Cash & Other	6.8	5.9	+0.9
Total Irish	35.2	74.6	-39.4
Total Non-Irish	64.8	25.4	+39.4

The swing has primarily been away from the fixed interest sector towards international equities. The run-down in the proportion allocated to the Irish equity market is rather modest at about 6% of total pension assets. The move away from Irish assets is more pronounced than the move to international equities, a difference that is almost all accounted for by the substitute of other euro-bonds for Irish sovereign euro-bonds following the introduction of the euro. This latter change, swapping two almost identical assets, is not economically significant to either pension funds or to the Irish economy.

Earlier we remarked upon the impressive growth of pension assets, averaging 17% p.a. over both the last decade and quarter century. With this growth rate were Irish pension assets becoming a bigger fish in a smaller pool of investible opportunities in Ireland?

Table 5: Size of Irish Pension Assets Compared to that of Irish Capital Markets, 1990-2000

Year	(1) Irish Pension Funds (IR£ m)	(2) Irish Gilt Market (IR£ m)	(3) Irish Equity Market (IR£ m)	(4) (1)/(2)	(5) (1)/(3)	(6) (1)/[(2)+(3)]
2000	41,375	16,342	62,888	2.53	0.66	0.52
1997	25,763	20,430	36,762	1.26	0.70	0.45
1995	16,957	16,903	15,916*	1.00	1.07	0.52
1992	9,737	12,782	6,572*	0.76	1.48	0.50
1990	8,095	12,289	5,862*	0.66	1.38	0.45

Souces: For Irish pension funds, IAPF, otherwise *Irish Stock Exchange Annual Statistical Review 2000* or various *Quarterly Bulletins of The Central Bank of Ireland*. * denotes the capitalisation of the official list (of which the ISEQ Index is a subset), otherwise, it is the capitalisation of stocks within the ISEQ Index.

The table answers the question. It shows that Irish pension funds grew considerably faster than the size of the Irish gilt market, coming from being two-thirds the size of Irish government gilts in issue at the start of the decade to now amounting to more than two and a half times their size. Clearly, the proportion of Irish pension funds in the domestic gilt market had to fall. However, columns (5) and (6) show that the Irish equity market had expanded faster than the gilt market contracted and could have absorbed the increase in pension fund assets without a significant change to the proportion owned by pension funds of the domestic capital markets. So the explanation that Irish pension funds had outgrown their domestic capital market, forcing them to diversify internationally, is too simple an explanation and is not supported by the evidence. Irish pension funds may have grown increasingly concerned with the stock specific risk inherent in the relatively small and narrow range of the Irish equity market and this rather than size considerations could have lead to the overseas diversification.

The major trend over the last decade in pension fund investment has been the increasing exposure to international equities, and a corresponding run-down of, primarily, the Irish fixed interest exposure but also of Irish equities.

1.5 International Comparison of Pension Fund Distributions

Ireland is one of a few economies where pension funds are almost entirely free to choose in what to invest. The trustees of pension funds in Ireland must simply be 'prudent' persons when it comes to selecting investments and state regulation has allowed them near total freedom of choice save for a sensible restriction on the level of self-investment (i.e., investing in the sponsoring employer) so that the pension promise is not too tightly tied to the fortunes of the sponsoring employer. The 'prudent man principle' of investing and freedom from state regulation (other than on self-investment) is also a feature of the pensions industry in the Netherlands, UK, Australia, the US, and Canada. Indeed, the European Commission in a recent Directive wants the extension of the prudent man principle and freedom from regulation to other European countries arguing that:

> *In Member States where this principle is in place, funds have managed to achieve returns over the past 15 years which were twice as good as the returns achieved by funds applying uniform quantitative investment restrictions, without any detrimental effects on the security of these funds.*[9]

[9] *Institutions for Occupational Retirement Provision: Commission Proposes Directive.* Single Market News, No. 23, October 2000, European Commission, and available at www.europa.eu.int/comm/internal_market/en/smn23/s23mn16.htm

Accordingly, in comparing the asset distribution of pension assets around the world it is appropriate to compare the asset distribution of Irish schemes only with those other jurisdictions where the prudent man principle applies untrammelled. Table 7 does just this.

Table 6: Average Asset Allocation of Pension Funds where Investment Guided by Prudent Man Principle, 1999.

Asset Type	Ireland	Netherlands	UK	US	Australia	Average (ex. Ireland)
Bonds	25	41	17	28	25	28
Equities	65	50	75	65	55	61
Property	5	6	4	3	5	5
Cash & Other	5	3	4	4	15	6
% of which foreign	60	57	28	11	19	29

Sources: For Ireland, IAPF Survey (1999), otherwise Phillips & Drew (2000).

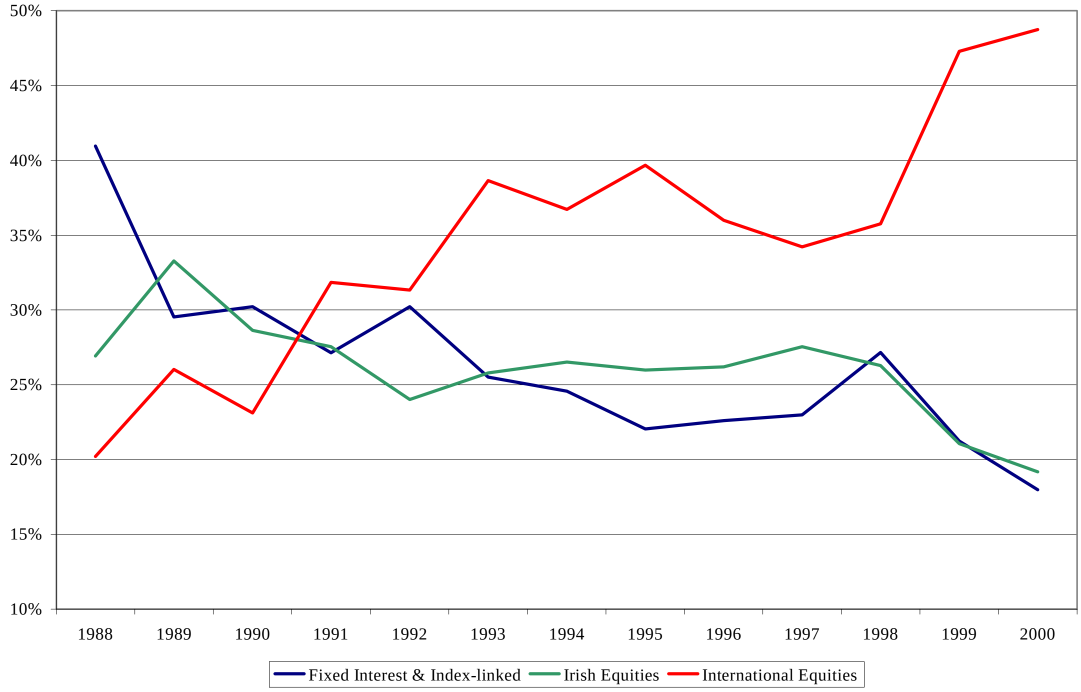
The table above shows that there is nothing unusual in the asset distribution of Irish pension assets when it comes to the major asset categories. The significant difference is the proportion invested in overseas assets, which exceeds that of even the Netherlands. Ireland is a smaller and more open economy than the others so perhaps it is no surprise that we find Irish long-term savings more integrated into the world's capital markets.

The trend over the last decade and longer is for pension funds around the world to build up exposure to equities and to foreign assets (Whelan (2001)). The evolution of the asset distribution of Irish funds, accordingly, reflects international trends.

1.6 Explaining the Trend in Irish Pension Fund Distributions

The major trends in the asset allocation of Irish pension funds is captured below where the proportion of unitised and segregated pension assets in the fixed interest & index-linked, Irish equity, and overseas equity sectors between 1988 and 2000, is graphed.

Figure 3: Proportion of (non-insured) Pension Funds in Each Principal Asset Class, 1988-2000



Source: IAPF Annual Surveys, see Appendix IV.

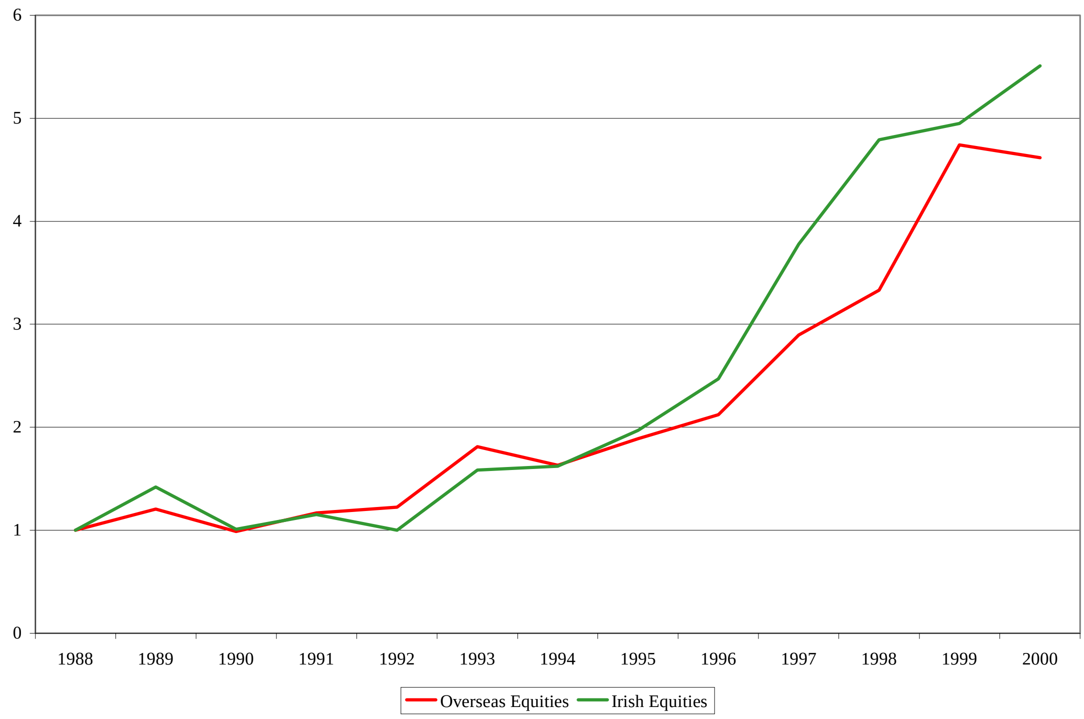
The graph shows that there was a build up to overseas equities in the late 1980s and early 1990s, the proportion plateaued between 1993 and 1998, and then in the last two years there was another significant increase to this sector. The build up to overseas equities was financed by a reduction in, primarily, fixed interest in late 1980s and early 1990s but from 1998 onwards there was an even reduction in fixed interest and Irish equities. The evolution of the average asset distribution can thus be seen more as two step changes than a continuous alteration. Indeed, the two step changes can be identified with a significant change in the environment of investment in Ireland – the abolition of exchange controls on overseas investments on 1st January 1989 and the introduction of the euro at the start of 1999.

Between December 1978 and December 1988 Irish pension funds were restricted to investing no more than 12½% of their net cashflow in (quoted) overseas securities. When this restriction was lifted, there was a significant portfolio realignment in pension portfolios towards overseas equities at the expense of Irish fixed interest holdings. The most perplexing part of this change is there was relatively little change in the proportion in Irish equities. During the times of the exchange controls, Irish portfolio managers were frustrated into holding the total equity exposure below desired levels and, to counteract this, had maintained

Irish equities at uncomfortably high levels judged by stock and sector concentrations.[10] One might therefore have expected a proportional run-down in the Irish holdings of funds to finance the overseas equities build up, not just of fixed interest.

One possible explanation is that when exchange controls were lifted, Irish equity holders were willing sellers at a reasonable price but there were no significant buyers at those prices. Just because Irish authorities relaxed constraints on Irish holders does not entail an immediate influx of foreign buyers – it would take time for buyers to come in the volume required unless there was to be a 'fire sale' of assets. Under this hypothesis, Irish equities would be priced at their opportunity cost of investing in overseas equities. Making the admittedly crude identification of ex-post performance with expected ex-ante performance at the time of the abolition of exchange controls then we find that the subsequent performance of Irish equities was close to but generally higher than the performance of foreign equities held by Irish pension funds since the end of 1988 (see Appendix V).

Figure 4: Cumulative value of IR£1 invested on 31st Dec. 1988 to 31st Dec. 2000.



This interpretation implies that Irish pension funds were still supporting the Irish equity market after the abolition of exchange controls at a price level that reasonably represented the

[10] Over this period roughly three-quarters of the capitalisation of the Irish equity market was concentrated in 10 stocks and the sector orientation of the market was skewed to financials, food processing, paper/packaging, and building/construction.

opportunity cost. It provides a rationale for the otherwise perplexing portfolio alteration after the abolition of exchange controls.

The other significant shift of Irish pension portfolio was in and around the time that Ireland became a founding participant in the euro. The direction if not the magnitude of the portfolio shift, away from Irish equities into other euro equities, was reasonably well anticipated and it is envisaged that this will continue to be a trend over the coming years.[11] The further reduction in fixed interest is either a temporary blip or part of the international secular trend towards greater proportions in equities – it cannot reasonably be attributed to the introduction of the euro.

1.7 Conclusion

Irish pension funds have grown at a real rate of 17% p.a. for the last quarter century and this heady pace of growth has seen no slowdown over the last decade or so. Most of the growth in assets has been due to the underlying performance of the investments made, leading to an equally impressive growth in average assets per member.

The size of Irish pension funds is now significant in a national context, amounting to 60% of GNP. This compares well with other economies and, even when pension assets are combined with other long-term savings, Ireland still ranks amongst the most providently provided for nations. The new initiative, the National Pensions Reserve Fund, whereby previously unfunded state pension liabilities are now partly funded, ensures that this comparison will remain favourable in the coming years.

There has been a significant shift in the distribution of Irish pension assets around the world's capital markets. Exchange controls limiting the amount of money to be invested overseas were abolished on 1st January 1989 and this allowed Irish pension funds to invest up to their risk tolerance in overseas equities – leading to a portfolio shift of 10% of total assets in the late 1980s from fixed interest to international equities. Another key shift of the order of 10% of total assets accompanied the adoption of the euro at the end of the 1990s, this time the disinvestments appearing to be permanently from Irish equities and directed primarily to other euro-denominated equities. Finally, in between these two major events, there was a drift away from the underperforming fixed interest sector towards equities (of about 5% of total assets), which reflects a general trend in pension assets worldwide. The upshot is that over the last dozen years, Irish pension funds have effected a movement of one-quarter their assets from Irish assets (mostly fixed interest but partially domestic equities) to international equities.

Is this a good thing? Viewed from the perspective of those charged with the responsibility for pension schemes, the answer is an unambiguous 'yes'. Irish pension funds have been freed to invest in better performing overseas equities (selling fixed interest) that has lead to a material gain and aided the overall growth of pension assets. The performance of the overseas equity proportion of Irish pension funds has on average exceeded that of fixed interest by 6.1% p.a. since the end of 1988 (see Appendix V), so that IR£1 invested in overseas equities has now compounded to more than double the value of IR£1 invested in fixed interest at the start of 1989. In a macroeconomic context this has lowered employment costs in Ireland below what they would otherwise have been.

So Irish pension trustees have used the investment freedom wisely, profited from it, and this largely accounts for the growth in assets observed. But is what is good for individual pension schemes good for the nation as a whole? The next section reviews some of the arguments made over the last couple of decades to arrest the trend of Irish pension funds away from Irish assets. The arguments are not new in themselves, just newly applied to pension funds. They demand that we address the very old puzzle, asked with renewed urgency every time economic growth disappoints, and well put 150 years ago:

> "…to account for this remarkable state of Ireland – that there are thousands of able-bodied labourers unable to get employment, thousands more on scanty wages of 6d. and 8d. a-day, millions of acres of improveable land lying wholly waste, millions of acres badly cultivated, whilst more than 20,000 capitalists, all Irishmen, find it for their interest to lend £38,000,000 at 3¼ per cent. to the government of the richest country in the world."[12]
>
> Hancock (1851, p. 14)

[11] See, for instance, Whelan (1998).

[12] Irish national income at that time was about £80 million (see Kennedy *et al.* (1988, p.16)) so the £38 million was 48% of national income. The IR£26.8 billion of Irish pension fund money invested abroad at the end of 2000 was, coincidentally, 48% of GNP (IR£55.8 billion). Irish overseas investments are still directed primarily to the world's richest economies.

2. Initiatives to Effect the Asset Allocation of Irish Pension Funds in last two Decades

2.1 In the National Interest

The growing significance of pension assets over the last couple of decades has attracted the attention of policymakers wishing to harness them in the national interest. In the mid-1980s, with economic performance weak and unemployment at a high, the then Taoiseach attributed the poor performance partly to the shortage of equity capital for indigenous industry and inferred "that some of the shortage of equity financing could be met by voluntary direction by pension funds of their investment policies but if that did not happen the Government might take a different approach to pension funds in fiscal and taxation matters" (OECD (1994), see also IAPF (1987)). In 1987, the then Minister for Industry and Commerce put it bluntly:

> "We now have an opportunity to work out between the industry and Government how these funds can be put to the best use in the national interest."

Again, in 1993, the Minister for Finance, returned to the theme:

> "The Government considers that Irish pension funds have a national responsibility to take the needs of the Irish economy particularly the need for more jobs into account when making their investment decisions, and that they should make a greater contribution to the development of employment in Ireland. These funds should therefore invest as much as possible of their assets in Ireland…"[13]

However, as observed, these remarks did not arrest the move away from Irish assets. Nor indeed were they likely to without a fundamental change to the pension trustees' responsibility to invest solely in a prudent manner to maximise returns.

The argument made by politicians in the 1980s and 1990s was that Ireland's economic performance, and in particular its employment level, was below what it might have been because of a shortage of capital. In this line of thinking it is objectionable that Irish investors should continue to direct their investments abroad, starving the economy of funds it needs.

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[13] Minister for Finance, Financial Statement in Budget Book 1993, pp 31-32.

We have thus to establish whether the Irish economy suffered from a lack of capital, and if so, what is the best way of making up the deficit.

2.2 Is There Really A Want of Capital in Ireland?

Hancock, quoted earlier, gave a review of the arguments made in the first half of the 19th century in a paper with the title of this subsection. His paper, still relevant today, comes down on the side of Longfield (1849):

> "It shows that in Ireland capital is not so much wanted as the means of employing it, since every year there is a steady flow from Ireland to England of capital seeking for investment."

The argument that clinched it for Hancock, captured in the quote, will hardly convince a modern economist. Yet the point that pension fund money would stay in Ireland if properly remunerated is material. Figure 3 earlier shows that Irish pension funds have not sacrificed extra return in shifting their portfolios overseas but have, at the same time, achieved tangible benefits of diversification (witness the performance of overseas equities in Appendix V, though similar to Irish equities in the long term, being delivered at different times). Similarly, overseas investors are tempted to the Irish market to achieve similar diversification benefits especially now that Ireland is part of the euro bloc. Now if there was a shortage of capital in Ireland why is it that what capital there is is not achieving the scarcity premium that could be expected?

The debate did not of course stop with Hancock's contribution. Bastable (1884) and Whitaker (1958) reiterated Hancock's conclusion that, as Whitaker put it, "…the real shortage is of ideas and these are likely to fructify only if domestic conditions favour profit-making". McAleese (1984), borrowing the title of Hancock's paper, provides a modern and more comprehensive treatment of the problem but the conclusion remains largely unchanged[14]:

> "At the macroeconomic level there has been no evidence of capital shortage…The problem has been our failure to mobilise available capital to optimal effect...Attempts to blame the poor showing of the private traded

[14] McAleese (1984) also provides the survey of what Irish economists thought in the past on which our current discussion is based.

sector on a shortage of capital are as misplaced nowadays as they were in the past."

A key part of this later analysis rested on a comparison of gross fixed capital formation rates in Ireland to the main economies in Europe between 1970 and 1981, which showed that Irish rates were more than double that of the others. Ó Gráda (1997) introduces a little doubt on this point when he argues that the appropriate benchmark of comparison is with other European economies with a similar GDP per capita as Ireland and, on this basis, Ireland's gross investment rate lagged the peer group.

Finally, in conclusion, we note that the extraordinary economic performance of Ireland in the 1990s was not preceded by or accompanied by an appreciably higher growth rate of physical capital stock, the growth rates being 4.0% p.a. in the period 1960-80, 2.5% p.a. between 1980-93 and 4.3% since 1993.[15] While there are, of course, many paths to economic success, this recent episode shows that Ireland was not debarred due to lack of capital.

The macroeconomic arguments presented above do not readily support the proposition of Irish politicians that there was or is a scarcity of capital in Ireland. The facts provide somewhat better, but still inconclusive support, to the proposition that there has been a want of investment opportunities in Ireland. Foreign direct investment in recent times has, of course, been well remunerated in Ireland. However, in this case the ideas and the capital came as one package and the return on capital is a complex mix of grants, low capital taxes, transfer pricing, uncosted patent licensing, returns to scale, as well as underlying added value. Not all of these modes of return are open to indigenous firms so to gain exposure to these investment opportunities in Ireland one must, ironically, invest overseas.

2.3 Is there Really a Want of Investment Opportunities in Ireland?

The macroeconomic argument above lends support to the view that, on average and in aggregate, Irish economic growth was not constrained by a shortage of capital. However, this is far from concluding that there are no blind spots in the economy where capital and opportunity fail to meet.

[15] Kennedy (2001), Table 5, or for the total spend and its breakdown by sector over the last couple of decades, see Chart 2 in Bacon (1997).

Long-term investors acquire financial claims on future profit, rental, or interest income; entrepreneurs make investments in the strict economic use of the terms. Now there can be a very real mismatch between the claims that savers want to acquire and the investments that a local entrepreneur might want to make. Two forms of mismatch commonly arise: a risk mismatch or a size mismatch. To overcome either of these one requires an intermediary or bridging agent so that capital might meet opportunity.

It is difficult to maintain that the first generic form of mismatch, a mismatch between the risk appetite of capital and that of the potential projects, holds in modern times. Irish pension funds maintain comfortably over half their total funds in equity exposure. It is clear from the subsequent portfolio shift that their risk appetite was not satiated between the end of 1978 and 1988 when exchange controls limited the extent to which Irish pension funds could invest overseas. So, while there are arguments and many anecdotes[16] to suggest that risk mismatch may have been a problem in Ireland before modern times, it is not a criticism that can be maintained any longer against the current dominant long-term investors.

The second form of mismatch looks a more promising line of argument. Irish pension assets are concentrated in a dozen or so investment management institutions. The investment process of such large fund management groups inevitably focuses on the major trends and opportunities in the world's capital markets, with the relatively small number of investment professionals and fee levels reflecting this emphasis on the wholesale markets. With this orientation of investing institutions, there is, prima facie, a case that small local investment opportunities might be overlooked.

The 1993 Report

The Walsh & Murray (1993) report into pension funds investing in Irish venture capital commissioned jointly by the Department of Finance, the IAPF, the IAIM and the Irish Insurance Federation suggested that "an investment of IR£10 million per annum is equivalent to 0.08% of pension fund assets and it would not be unreasonable for pension funds to invest an amount of this order" (p.86). The Irish pension industry did voluntarily commit funds of

[16] Irish bank lending in the early part of the 20th century has often been criticised as too risk averse, providing at most short-term accommodation for working capital. Two anecdotes add colour to the contention. Irish banks initially wanted a British Treasury guarantee to underwrite the first loan to the Irish Free State a few years after the War of Independence. The Irish government, unsurprisingly, made other arrangements (Ó Gráda (1994), p. 368). Second, Ireland's industrial development bank, the ICC, recalled a business loan on no other grounds than the entrepreneur placed a bet, albeit large, of his own money at Cheltenham (Casey (2000), p. 14).

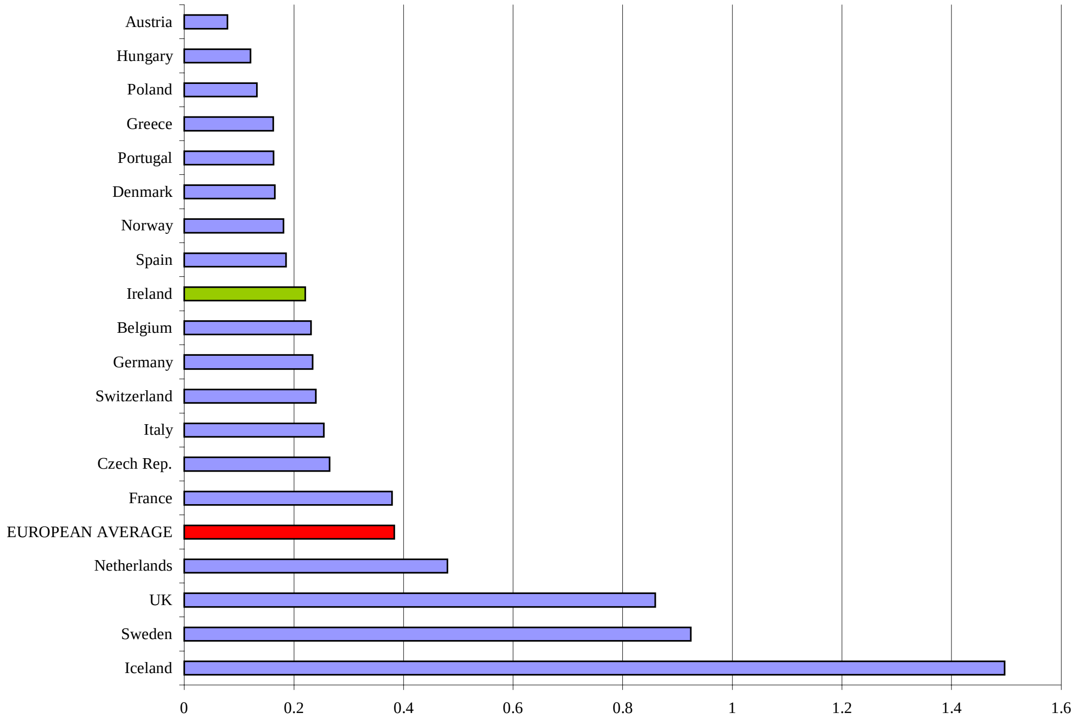
this order to venture funds, perhaps less convinced then of the investment merits of the scheme itself than of the wisdom of not appearing unreasonable to a Minister for Finance who had suggested the initiative in the first place. Several intermediaries set up specialist funds to channel the money into local projects and the indications seven years on is that such investments have more than held their own against the alternatives. One of the biggest such funds, the ICC Venture Capital Fund which amounted to IR£20 million at launch in July 1994 has grown by 25.6% p.a. net of management charges up to April 2001.[17] Other venture capitalists, such as ACT Venture Capital, report similar sound performances with gross internal rates of return averaging over 20% p.a. over the long term. These returns bear favourable comparison to the returns delivered by other asset classes.

The UK, with a similar financial system and similar importance of pension funds, has had major reviews roughly every quarter century in the functioning of the system with the Macmillan Committee on Finance and Industry (1931), the Radcliffe Committee on the Working of the Monetary System (1959), the Wilson Committee Report (1980) and now the Myners Report (2001). The most recent investigation was to address the role of pension funds in providing venture funds but has reported and made recommendations on considerably wider issues. This later report suggests that the Macmillan gap (that is a gap in the supply of equity and other long-term capital to small businesses first identified in the 1931 Report) is still present with returns from UK private equity comfortably above that of the FTSE All-Share over the last decade. In particular, they note that UK pension schemes provide relatively little capital to this sector, the majority being provided by foreign (mostly US) investors. A recent report by O'Brien (2001) into Irish institutional provision of venture capital suggests that there is considerably more headroom for Irish institutions to participate, that their allocation of 0.1% of total funds compares unfavourably with the 0.5% of UK pension funds and is only a fraction of the 5-6% exposures maintained by US pension funds.[18]

Finally, in an update of the figures in O'Brien (2001) and Myners (2001), the European Private Equity & Venture Capital Association (EVCA) in their recently published yearbook for 2001 rank Ireland in the lower half of European nations when listed by venture capital as a percentage of GDP.

[17] These funds are, of course, highly illiquid and their holdings difficult to value. However, this best estimate of current returns is encouraging.
[18] O'Brien, F. (2001) *Venture Capital and the Irish Investment Institutions,* A Report Commissioned by ACT Venture Capital, p. 8.

Figure 5: Private Equity Investment as a % of GDP in European Economies



Source: EVCA Yearbook 2001, p. 65.

This shows that Irish investors, given the comparative size of their funds, have a comparative deficit in this sector.

We can conclude that the relatively small investment in local ventures has justified itself and should encourage pension funds to seek further opportunities in private equity, aided by the small specialist advisory and investment industry that has grown over the last few years in Ireland. However, at the macroeconomic level this will have a negligible impact on overall economic growth. Even if Irish institutions double their investments in this sector, from 0.221% of GDP to exceed the European average of 0.383% at the end of 2000 and achieve a rank within the top five nations, the numbers are not large enough to make a perceptible difference to the trajectory of economic growth. Nor could it be otherwise: too much money chasing too few opportunities would quickly kill this nascent sector. In this regard, one is reminded of the less than encouraging return achieved by the ICC in its early days when its operations had a larger impact on the economy.[19]

[19] See Casey (2000) and *The Commission of Enquiry into Banking, Currency and Credit* (1938), pp. 269-277.

The 1996 Report

Another report in the 1990s, which could have a potentially bigger impact on the Irish economy was the report by Bacon *et al.* (1996) on *The Scope for Increasing Investment Opportunities for Irish Pension Funds in the Economy of Ireland*, of which an updated and more concise version was published subsequently (Bacon (1997)). The report was commissioned by the Department of Finance, the IAPF, and the IAIM. The report focuses on the balance of payments from the perspective of the capital account and posits that Ireland will continue to have a surplus of savings above domestic investment opportunities in the medium term. Accordingly there must be a build up of external assets; the only question is who should own them.

The main thesis of Bacon *et al*. is that if Irish pension funds are not to build up the exposure to overseas assets, then they must swap some of their current holdings and potential future holdings with another major Irish portfolio holder and investor. Now it is easy to identify the counterparty - there is really only one candidate big enough - the Irish state sector. So the initiatives proposed in the report centre on the Irish government divesting of commercial State Sponsored Bodies (SSBs) or that new investment programmes by the State might be financed by private sector finance initiatives (PSI) rather than directly by the State itself. This is logical as it is the main scope for increasing investment opportunities for Irish pension funds in the economy of Ireland. However, outside the remit of the report, is the larger question of whether this swap is a good or bad thing.

An obvious point to be made in this connection is that pension funds, when it comes to investing abroad, primarily invest in overseas equities with, at the end of 2000, three-quarters of their foreign holdings in this form. This sector performed very well indeed over the last decade and longer and has, at the same time, reduced portfolio risk by diversifying pension fund holdings. If the State were to sell SSBs and, say, reduce the national debt held by non-residents then the upshot is that the State and Irish long-term investors have altered their combined portfolios to reduce foreign equities and build up overseas bonds.[20] This is moving the combined portfolio away from the better performing asset class entailing that the portfolio shift benefits overseas portfolio managers at the expense of Irish ones. Accordingly, both Irish resident long-term investors and the state portfolio achieve, in aggregate, a lower return.

[20] Strictly, reduce the short position in bonds.

Since the publication of the report in 1996 the Irish government did dispose of a major State asset, now known as Eircom, and Irish pension funds were amongst the biggest buyers. However, the State did not use the proceeds to reduce the outstanding foreign debt but instead established its own pension fund, the National Pensions Reserve Fund. Ironically, the current Minister for Finance rejected the notion that this pension fund should invest in what was previously narrowly defined as the 'national interest' but stated:

> "It is my firm view that any dilution of the commercial nature of the investment mandate, for example by requiring the Commissioners to maintain a certain level of investment in the Irish economy, could seriously compromise the returns achieved by the Fund…The use of the Fund moneys for any other objective, no matter how laudable, should not be countenanced. Such objectives, if worth achieving, can be attained in other ways."[21]

The investment strategy of this fund, endorsed by several commentators[22], is to invest the majority of assets in overseas equities. The upshot is that the Irish State has swapped part of its Irish equity portfolio for the overseas equities of Irish long-term investors such as pension funds. Though it's early days yet, it looks as if the Irish State was on the better side of the deal.

There are many reasons why the sale of SSBs or new PSIs might be contemplated but the justification that it would increase Irish pension fund investment in the Irish economy is very thin indeed. As the Eircom episode makes clear, the simple transfer of existing equity from one long-term holder to another is not investment in the manner to aid economic growth, it is merely a portfolio realignment – a transfer within the economy. We have here at heart another instance of the confusion caused by the different meanings attached to the term 'investment'; when speaking of economic growth the economist's strict distinction between saving and investment is helpful: pension funds save (e.g. acquire financial claims), while entrepreneurs, using savings in return for financial claims, invest.

[21] Minister of Finance, on the second reading of the *National Pensions Reserve Fund Bill, 2000* on 3rd October 2000. The full text of the speech to Dáil Éireann is available to download www.irlgov.ie/finance.

[22] Honohan & Lane (2000); Lane (2001); Whelan (2001).

2.4 Conclusion

The catch-up growth of the Irish economy to other European economies over the last decade has lessened the urgency of the debate about the use of capital in Ireland. The debate, though, is only a recession away. This section briefly reviewed arguments and initiatives directed to encourage Irish pension funds to invest more in Ireland over the last two decades. Pension funds are the dominant current long-term savers in Ireland and are heirs to a very long debate on whether they are doing enough to foster economic growth in Ireland.

This short overview does not, of course, settle the debate but brought together major points that have been made over the years. In particular, it is shown that the scope for Irish pension assets to enhance economic growth is neither as direct nor as significant as is often made out. However, Irish pension funds do have a role, however modest, and that role need be pursued on no more laudable a basis than self-interest.

Appendix I:

Notes on the IAPF Annual Investment Survey of Irish Pension Schemes

The IAPF annually surveys by questionnaire some 25 or so financial institutions involved in Irish pension fund asset management and supplements the replies by directly contacting some of the larger pension funds in Ireland to build up a snapshot of the size, growth, and investment strategy followed by Irish pension funds. The survey inevitably misses out on some scheme assets (e.g., managed by overseas fund managers not surveyed) or directly managed by the scheme itself (e.g., some property investments). The extent of under-representation is thought to be modest with one estimate (back in 1989) putting it at about 5% of total assets.

The investing institution replies with the amount of pension assets it manages on (i) a segregated basis, (ii) a unitised basis, and (iii) insured basis (generally, deposit administration, deferred annuity or more recently unitised with-profits). Assets are further broken down into the proportion in each major investment sector (see Appendix II for the summary table of the 2000 survey). Assets not managed by one of the financial institutions surveyed are captured by surveying the larger pension funds in Ireland known to manage some assets 'in-house'. This method of survey, primarily by investing institution rather than by pension scheme, can lead to some distortions especially when the asset distribution of the typical scheme is wanted. For instance the results of the end year 2000 survey record that the proportion investing in Irish property on a segregated basis is 2.9% of total segregated assets while the proportion invested of unitised assets is considerably higher at 11.8%. From this we cannot conclude that there is a difference in the property exposure between these different vehicles of investment. It is common practice for segregated schemes to hold some investments in unitised form, especially in those sectors like property that require specialist managers and where it is otherwise difficult to achieve a suitable spread of investments. To overcome drawing some such shaky inferences it is necessary to combine both segregated assets and unitised assets and, even at times, include insured assets.

Appendix II: Summary of IAPF Investment Survey for Year End 2000

	Segregated Assets			*Unitised Assets*			*Insured Assets*			*Total Assets*		
	IR£m	***€m***	***%***	***IR£m***	***€m***	***%***	***IR£m***	***€m***	***%***	***IR£m***	***€m***	***%***
1. MARKET VALUE OF ASSETS	23,613.4	29,982.9	100.0	12,725.0	16,157.5	100.0	5,036.6	6,395.2	100.0	41,375.1	52,535.5	100.0
2. ASSET DISTRIBUTION BY SECTOR												
IRISH	**7,585.7**	**9,631.9**	**32.1**	**4,987.1**	**6,332.3**	**39.2**	**1,994.6**	**2,532.6**	**39.6**	**14,567.4**	**18,496.8**	**35.2**
Fixed Interest: Government	1,273.6	1,617.1	5.4	716.1	909.2	5.6	669.0	849.4	13.3	2,658.6	3,375.7	6.4
Fixed Interest: Corporate	22.4	28.5	0.1	0.6	0.8	0.0	103.4	131.3	2.1	126.5	160.6	0.3
Index Linked	31.6	40.1	0.1	7.8	9.9	0.1	0.0	0.0	0.0	39.4	50.1	0.1
Equities: Quoted	5,018.9	6,372.7	21.3	1,882.1	2,389.7	14.8	862.4	1,095.0	17.1	7,763.3	9,857.4	18.8
Equities: Unquoted	43.4	55.1	0.2	23.2	29.5	0.2	0.0	0.0	0.0	66.7	84.7	0.2
Property	676.2	858.6	2.9	1,501.8	1,906.9	11.8	195.2	247.8	3.9	2,373.2	3,013.3	5.7
Forestry	75.3	95.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	75.3	95.7	0.2
Cash and Cash Instruments	443.7	563.3	1.9	801.0	1,017.0	6.3	159.0	201.9	3.2	1,403.7	1,782.3	3.4
Other	0.6	0.8	0.0	54.5	69.2	0.4	5.7	7.2	0.1	60.8	77.2	0.1
NON IRISH - Eurozone												
Fixed Interest (Euro-zone ex Ireland) - Government	2,375.5	3,016.3	10.1	1,479.8	1,879.0	11.6	1,357.2	1,723.3	26.9	5,212.6	6,618.6	12.6
Fixed Interest (Euro-zone ex Ireland) - Corporate	43.7	55.5	0.2	85.0	107.9	0.7	297.5	377.8	5.9	426.2	541.2	1.0
Equities Euro-zone	3,495.6	4,438.5	14.8	2,161.8	2,745.0	17.0	390.1	495.3	7.7	6,047.5	7,678.8	14.6
Property	126.6	160.8	0.5	29.0	36.8	0.2	0.0	0.0	0.0	155.6	197.6	0.4
Cash and Cash Instruments	237.4	301.4	1.0	57.5	73.0	0.5	64.4	81.8	1.3	359.3	456.2	0.9
Other	339.0	430.4	1.4	122.2	155.1	1.0	0.0	0.0	0.0	461.1	585.5	1.1
	6,617.9	**8,402.9**	**28.0**	**3,935.3**	**4,996.8**	**30.9**	**2,109.2**	**2,678.2**	**41.9**	**12,662.4**	**16,077.9**	**30.6**
NON IRISH - ex Eurozone	16,027.7	20,351.0	67.9	7,737.9	9,825.1	60.8	3,042.1	3,862.6	60.4	26,807.7	34,038.7	64.8
Fixed Interest (World ex Eurozone ex Ireland) - Govt.	2,520.1	3,199.9	10.7	1,820.5	2,311.6	14.3	1,564.7	1,986.8	31.1	5,905.4	7,498.3	14.3
Fixed Interest (World ex Eurozone ex Ireland) - Corp.	53.8	68.4	0.2	86.2	109.4	0.7	321.7	408.5	6.4	461.8	586.3	1.1
Equities UK	2,390.5	3,035.3	10.1	860.6	1,092.7	6.8	181.5	230.5	3.6	3,432.6	4,358.5	8.3
Equities US	3,212.6	4,079.2	14.9	1,075.6	1,365.7	8.5	237.9	302.1	6.0	4,526.1	5,747.0	11.8
Equities Europe (ex Euro-zone ex Ireland)	4,308.1	5,470.2	18.2	2,500.7	3,175.2	19.7	455.3	578.1	9.0	7,264.2	9,223.6	17.6
Equities Pacific Basin (ex Japan)	1,431.6	1,817.7	6.1	752.5	955.5	5.9	122.2	155.2	2.4	2,306.3	2,928.3	5.6
Equities Japan	917.0	917.0	917.0	917.0	917.0	917.0	917.0	917.0	917.0	917.0	917.0	917.0
Equities Other Overseas	27.0	34.3	0.1	6.4	8.1	0.0	6.9	8.7	0.1	40.2	51.1	0.1
Property	198.2	251.7	0.8	79.3	100.6	0.6	0.0	0.0	0.0	277.5	352.3	0.7
Cash and Cash Instruments	305.2	387.5	1.3	85.4	108.4	0.7	66.6	84.6	1.3	457.3	580.6	1.1
Other	654.3	830.8	2.8	249.3	316.5	2.0	0.3	0.4	0.0	903.9	1,147.7	2.2
	9,409.8	**11,948.0**	**39.8**	**3,802.6**	**4,828.4**	**29.9**	**932.8**	**1,184.4**	**18.5**	**14,145.3**	**17,960.8**	**34.2**

Appendix III: Summary of IAPF Investment Surveys, 1988-1999.

	1988 Combined Segregated & Unit-Linked Assets		Total Assets		1989 Combined Segregated & Unit-Linked Assets		Total Assets		1990 Combined Segregated & Unit-Linked Assets		Total Assets	
	IR£m	%	IR£m	%	IR£m	%	IR£m	%	IR£m	%	IR£m	%
1. Total Market Value of Assets	**5,528**	**100.0**	**6,390**	**100.0**	**6,574**	**100.0**	**7,539**	**100.0**	**7,148**	**100.0**	**8,095**	**100.0**
IRISH	**4,186**	**75.7**	**5,048**	**79.0**	**4,574**	**69.6**	**5,539**	**73.5**	**5,091**	**71.2**	**6,038**	**74.6**
Fixed Interest: Government	2,001	36.2	2,863	44.8	1,591	24.2	2,556	33.9	1,676	23.4	2,623	32.4
Fixed Interest: Commercial	0	0.0			0	0.0			62	0.9	62	0.8
Index Linked	113	2.0	113	1.8	125	1.9	125	1.7	114	1.6	114	1.4
Equities: Quoted	1,489	26.9	1,489	23.3	2,188	33.3	2,188	29.0	1,984	27.8	1,984	24.5
Equities: Unquoted	0	0.0			0	0.0			62	0.9	62	0.8
Property	284	5.1	284	4.4	442	6.7	442	5.9	749	10.5	749	9.3
Forestry	11	0.2	11	0.2	13	0.2	13	0.2	16	0.2	16	0.2
Cash and Short-term Deposits	265	4.8	265	4.1	188	2.9	188	2.5	417	5.8	417	5.2
Other	23	0.4	23	0.4	27	0.4	27	0.4	11	0.2	11	0.1
NON-IRISH	**1,342**	**24.3**	**1,342**	**21.0**	**1,999**	**30.4**	**1,999**	**26.5**	**2,057**	**28.8**	**2,057**	**25.4**
Fixed Interest	136	2.5	136	2.1	214	3.3	214	2.8	305	4.3	305	3.8
Index Linked/Corporate	14	0.3	14	0.2	11	0.2	11	0.1	2	0.0	2	0.0
Equities: United Kingdom	460	8.3	460	7.2	596	9.1	596	7.9	659	9.2	659	8.1
Equities: United States	297	5.4	297	4.6	438	6.7	438	5.8	374	5.2	374	4.6
Equities: Continental Europe	128	2.3	128	2.0	414	6.3	414	5.5	408	5.7	408	5.0
Equities: Pacific Basin	160	2.9	160	2.5	213	3.2	213	2.8	196	2.7	196	2.4
Equities: Other Overseas	72	1.3	72	1.1	49	0.7	49	0.6	16	0.2	16	0.2
Property	24	0.4	24	0.4	25	0.4	25	0.3	45	0.6	45	0.6
Forestry	1	0.0	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0
Cash and Short-term Deposits	50	0.9	50	0.8	33	0.5	33	0.4	44	0.6	44	0.5
Other	0	0.0	0	0.0	5	0.1	5	0.1	8	0.1	8	0.1

Appendix III: Summary of IAPF Investment Surveys, 1988-1999.

	1991				1992				1993			
	Combined Segregated & Unit-Linked Assets		*Total Assets*		*Combined Segregated & Unit-Linked Assets*		*Total Assets*		*Combined Segregated & Unit-Linked Assets*		*Total Assets*	
	IR£m	%	IR£m	%	IR£m	%	IR£m	%	IR£m	%	IR£m	%
1. Total Market Value of Assets	**8,184**	**100.0**	**9,303**	**100.0**	**8,559**	**100.0**	**9,737**	**100.0**	**12,194**	**100.0**	**13,937**	**100.0**
IRISH	**5,204**	**63.6**	**6,323**	**68.0**	**5,191**	**60.6**	**6,369**	**65.4**	**6,869**	**56.3**	**8,612**	**61.9**
Fixed Interest: Government	1,714	20.9	2,833	30.5	1,804	21.1	2,982	30.6	2,368	19.4	4,111	29.5
Fixed Interest: Commercial	94	1.1	94	1.0	78	0.9	78	0.8	98	0.8	98	0.7
Index Linked	136	1.7	136	1.5	132	1.5	132	1.4	138	1.1	138	1.0
Equities: Quoted	2,150	26.3	2,150	23.1	2,009	23.5	2,009	20.6	3,087	25.3	3,087	22.2
Equities: Unquoted	104	1.3	104	1.1	47	0.5	47	0.5	57	0.5	57	0.4
Property	663	8.1	663	7.1	655	7.7	655	6.7	665	5.5	664	4.8
Forestry	15	0.2	15	0.2	19	0.2	19	0.2	26	0.2	25	0.2
Cash and Short-term Deposits	306	3.7	306	3.3	311	3.6	311	3.2	405	3.3	405	2.9
Other	24	0.3	24	0.3	132	1.5	132	1.4	27	0.2	27	0.2
NON-IRISH	**2,980**	**36.4**	**2,980**	**32.0**	**3,368**	**39.4**	**3,368**	**34.6**	**5,310**	**43.5**	**5,310**	**38.1**
Fixed Interest	276	3.4	276	3.0	572	6.7	572	5.9	504	4.1	504	3.6
Index Linked/Corporate	1	0.0	1	0.0	1	0.0	1	0.0	2	0.0	2	0.0
Equities: United Kingdom	873	10.7	873	9.4	753	8.8	753	7.7	1,179	9.7	1,179	8.5
Equities: United States	654	8.0	654	7.0	721	8.4	721	7.4	1,266	10.4	1,266	9.1
Equities: Continental Europe	507	6.2	507	5.4	567	6.6	567	5.8	989	8.1	989	7.1
Equities: Pacific Basin	535	6.5	535	5.8	609	7.1	609	6.3	1,207	9.9	1,207	8.7
Equities: Other Overseas	38	0.5	38	0.4	31	0.4	31	0.3	72	0.6	72	0.5
Property	53	0.6	53	0.6	40	0.5	40	0.4	55	0.5	55	0.4
Forestry	0	0.0	0	0.0	0	0.0	0	0.0	6	0.0	6	0.0
Cash and Short-term Deposits	28	0.3	28	0.3	71	0.8	71	0.7	25	0.2	25	0.2
Other	14	0.2	14	0.2	3	0.0	3	0.0	5	0.0	5	0.0

Appendix III: Summary of IAPF Investment Surveys, 1988-1999.

	1994				1995				1996			
	Combined Segregated & Unit-Linked Assets		*Total Assets*		*Combined Segregated & Unit-Linked Assets*		*Total Assets*		*Combined Segregated & Unit-Linked Assets*		*Total Assets*	
	IR£m	%	IR£m	%	IR£m	%	IR£m	%	IR£m	%	IR£m	%
1. Total Market Value of Assets	**11,855**	**100.0**	**13,661**	**100.0**	**14,235**	**100.0**	**16,324**	**100.0**	**17,315.5**	**100.0**	**19,208.5**	**100.0**
IRISH	**6,800**	**57.4**	**8,606**	**63.0**	**7,971**	**56.0**	**9,970**	**61.1**	**9,754.5**	**56.3**	**11,647.5**	**60.6**
Fixed Interest: Government	2,182	18.4	3,988	29.2	2,449	17.2	4,293	26.3	2,827.5	16.3	4,720.4	24.6
Fixed Interest: Commercial	28	0.2	28	0.2	17	0.1	27	0.2	46.8	0.3	46.8	0.2
Index Linked	147	1.2	147	1.1	168	1.2	170	1.0	180.2	1.0	180.2	0.9
Equities: Quoted	3,109	26.2	3,109	22.8	3,679	25.8	3,797	23.3	4,524.1	26.1	4,524.1	23.6
Equities: Unquoted	34	0.3	34	0.3	21	0.1	22	0.1	20.1	0.1	20.1	0.1
Property	766	6.5	766	5.6	1,025	7.2	1,032	6.3	1,202.7	6.9	1,202.7	6.3
Forestry	35	0.3	35	0.3	28	0.2	28	0.2	13.0	0.1	13	0.1
Cash and Short-term Deposits	478	4.0	478	3.5	563	4.0	576	3.5	934.3	5.4	934.3	4.9
Other	21	0.2	21	0.2	21	0.1	25	0.2	5.9	0.0	5.9	0.0
NON-IRISH	**5,055**	**42.6**	**5,055**	**37.0**	**6,264**	**44.0**	**6,354**	**38.9**	**7,561.0**	**43.7**	**7,561.0**	**39.4**
Fixed Interest	555	4.7	555	4.1	501	3.5	519	3.2	857.4	5.0	857.4	4.5
Index Linked/Corporate	1	0.0	1	0.0	3	0.0	3	0.0	3.9	0.0	3.9	0.0
Equities: United Kingdom	1,026	8.7	1,026	7.5	1,484	10.4	1,503	9.2	1,693.5	9.8	1693.5	8.8
Equities: United States	1,288	10.9	1,289	9.4	1,844	13.0	1,861	11.4	1,645.8	9.5	1,645.8	8.6
Equities: Continental Europe	952	8.0	952	7.0	1,124	7.9	1,137	7.0	1,459.8	8.4	1,459.8	7.6
Equities: Pacific Basin	996	8.4	996	7.3	976	6.9	993	6.1	1,060.8	6.1	1,060.8	5.5
Equities: Other Overseas	91	0.8	91	0.7	219	1.5	223	1.4	366.8	2.1	366.8	1.9
Property	78	0.7	78	0.6	84	0.6	85	0.5	43.5	0.3	43.5	0.2
Forestry	0	0.0	0	0.0	2	0.0	2	0.0	0.6	0.0	0.6	0.0
Cash and Short-term Deposits	61	0.5	61	0.5	26	0.2	27	0.2	317.0	1.8	317.0	1.7
Other	7	0.1	6	0.1	1	0.0	1	0.0	111.9	0.6	111.9	0.6

Appendix III: Summary of IAPF Investment Surveys, 1988-1999.

	1997				1998				1999				2000			
	Combined Segregated & Unit-Linked Assets		***Total Assets***		***Combined Segregated & Unit-Linked Assets***		***Total Assets***		***Combined Segregated & Unit-Linked Assets***		***Total Assets***		***Combined Segregated & Unit-Linked Assets***		***Total Assets***	
	IR£m	**%**	**IR£m**	**%**	**IR£m**	**%**	**IR£m**	**%**	**IR£m**	**%**	**IR£m**	**%**	**IR£m**	**%**	**IR£m**	**%**
1. Total Market Value of Assets	**23,630**	**100.0**	**25,763**	**100.0**	**27,159**	**100.0**	**30,800**	**100.0**	**34,409.3**	**100.0**	**39,601.3**	**100.0**	**36,338.5**	**100.0**	**41,375.1**	**100.0**
IRISH	**13,592**	**57.5**	**15,561**	**60.4**	**14,221**	**52.4**	**17,143**	**55.7**	**13,360.7**	**38.7**	**16,078.5**	**40.1**	**12,572.9**	**34.6**	**14,567.4**	**35.2**
Fixed Interest: Government	3,791	16.0	5,074	19.7	4,146	15.3	5,626	18.3	2,790.8	8.1	3,886.2	9.7	1,989.6	5.5	2,658.6	6.4
Fixed Interest: Commercial	61	0.3	305	1.2	53	0.2	346	1.1	19.3	0.1	1,64.11	0.4	23.1	0.1	126.5	0.3
Index Linked	149	0.6	150	0.6	144	0.5	144	0.5	141.2	0.4	141.2	0.4	39.4	0.1	39.4	0.1
Equities: Quoted	6,476	27.4	6,835	26.5	7,068	26.0	7,900	25.6	7,222.7	20.9	8,259.3	20.5	6,901.0	19.0	7,763.3	18.8
Equities: Unquoted	30	0.1	32	0.1	68	0.3	81	0.3	47.5	0.1	52.1	0.1	66.7	0.2	66.7	0.2
Property	1,424	6.0	1,486	5.8	1,645	6.1	1,777	5.8	1,620.4	4.7	1,806.2	4.5	2,178.0	6.0	2,373.2	5.7
Forestry	7	0.0	7	0.0	83	0.3	83	0.3	,64.2	0.2	64.2	0.2	75.3	0.2	75.3	0.2
Cash and Short-term Deposits	1,644	7.0	1,662	6.5	996	3.7	1,130	3.7	1,410.5	4.1	1,652.3	4.2	1,244.6	3.4	1,403.7	3.4
Other	9	0.0	9	0.0	16	0.1	53	0.2	44.1	0.1	52.8	0.1	55.1	0.2	60.8	0.1
NON-IRISH	**10,037**	**42.5**	**10,201**	**39.6**	**12,925**	**47.6**	**13,649**	**44.3**	**21,048.1**	**61.3**	**23,522.2**	**59.9**	**23765.6**	**65.4**	**2,6807.7**	**64.8**
Fixed Interest	1,427	6.0	1,459	5.7	1,759	6.5	2,158	7.0	4,088.7	11.9	5,089.4	12.8	4,340.7	11.9	5,905.4	14.3
Index Linked/Corporate	3	0.0	3	0.0	1,275	4.7	1,300	4.2	258.3	0.8	468.1	1.2	140.1	0.4	461.8	1.1
Equities: United Kingdom	2,285	9.7	2,331	9.0	2,504	9.2	2,607	8.5	3,616.8	10.5	3783	9.9	3,251.1	8.9	3,432.6	8.3
Equities: United States	2,613	11.1	2,641	10.3	3,099	11.4	3,173	10.3	4,317.8	12.5	4,748.1	11.8	5,436.0	15.0	5,758.7	13.9
Equities: Continental Europe	1,973	8.3	2,005	7.8	2,990	11.0	3,078	10.0	5,656.2	16.5	6,097.7	15.6	6,808.9	18.7	7,264.2	17.6
Equities: Pacific Basin	1,111	4.7	1,122	4.4	1,065	3.9	1,094	3.6	2,640.6	7.7	2,842.4	7.3	2,184.1	6.0	2,306.3	5.6
Equities: Other Overseas	104	0.4	117	0.5	52	0.2	58	0.2	23.2	0.1	26.2	0.1	33.3	0.1	40.2	0.1
Property	47	0.2	47	0.2	29	0.1	29	0.1	94.8	0.3	94.8	0.2	277.4	0.8	277.5	0.7
Forestry	0	0.0	0	0.0	0	0.0	0	0.0	11.4	0.0	11.4	0.0	0	0.0	0	0.0
Cash and Short-term Deposits	395	1.7	398	1.5	113	0.4	113	0.4	94.8	0.3	115.5	0.3	390.6	1.1	457.3	1.1
Other	78	0.3	78	0.3	37	0.1	37	0.1	245.7	0.7	245.7	0.6	903.6	2.5	903.9	2.2

Appendix IV: Analysis of Evolving Asset Distribution of Irish Pension Funds, 1988-2000

	1988		1989		1990		1991		1992		1993		1994	
	Segregated & Unitised %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets* %
Main Asset Groupings														
Fixed Interest & Index-linked	41.0	48.9	29.5	38.5	30.2	38.4	27.1	35.9	30.2	38.7	25.5	34.8	24.6	34.5
Irish Equities	26.9	23.3	33.3	29.0	28.6	25.3	27.5	24.2	24.0	21.1	25.8	22.6	26.5	23.0
International Equities	20.2	17.5	26.0	22.7	23.1	20.4	31.9	28.0	31.3	27.5	38.7	33.9	36.7	31.9
Property & Forestry	5.8	5.0	7.3	6.4	11.3	10.0	8.9	7.9	8.3	7.3	6.2	5.4	7.4	6.4
Cash	5.7	4.9	3.4	2.9	6.4	5.7	4.1	3.6	4.5	3.9	3.5	3.1	4.5	4.0
Other	0.4	0.4	0.5	0.4	0.3	0.2	0.5	0.4	1.6	1.4	0.3	0.2	0.2	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**99.9**	**100.0**	**100.0**	**100.0**
Total Irish	75.7	79.0	69.6	73.5	71.2	74.6	63.6	68.0	60.6	65.4	56.4	61.9	57.4	63.0
Total Non-Irish	24.3	21.0	30.4	26.5	28.8	25.4	36.4	32.0	39.4	34.6	43.6	38.1	42.6	37.0
Within Fixed Interest & Index-linked														
Irish Fixed	88.4	91.6	82.0	88.0	80.5	86.4	81.4	87.6	72.7	81.3	79.3	86.8	75.9	85.1
International Fixed & Index-linked	6.6	4.8	11.6	7.7	14.2	9.9	12.5	8.3	22.1	15.2	16.3	10.3	19.1	11.8
Irish Index-linked	5.0	3.6	6.4	4.3	5.3	3.7	6.1	4.1	5.1	3.5	4.4	2.9	5.0	3.1
Within Irish Equities														
Quoted	100.0	100.0	100.0	100.0	97.0	97.0	95.4	95.4	97.7	97.7	98.2	98.2	98.9	98.9
Unquoted	0.0	0.0	0.0	0.0	3.0	3.0	4.6	4.6	2.3	2.3	1.8	1.8	1.1	1.1
Within Property & Forestry														
Irish Property	88.8	88.8	91.9	91.9	92.5	92.5	90.7	90.7	91.7	91.7	88.4	88.9	87.1	87.1
Irish Forestry	3.4	3.4	2.7	2.7	2.0	2.0	2.1	2.1	2.7	2.7	3.5	3.7	4.0	4.0
Int. Property	7.5	7.5	5.2	5.2	5.6	5.6	7.3	7.3	5.6	5.6	7.3	7.4	8.9	8.9
Int. Forestry	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Within International Equities														
Equities: United Kingdom	41.2	41.2	34.9	34.9	39.9	39.9	33.5	33.5	28.1	28.1	25.0	25.1	23.6	23.6
Equities: United States	26.6	26.6	25.6	25.6	22.6	22.6	25.1	25.1	26.9	26.9	26.9	26.8	29.6	29.6
Equities: Continental Europe	11.5	11.5	24.2	24.2	24.7	24.7	19.4	19.4	21.1	21.1	21.0	20.9	21.9	21.9
Equities: Pacific Basin	14.3	14.3	12.5	12.5	11.9	11.9	20.5	20.5	22.7	22.7	25.6	25.7	22.9	22.9
Equities: Other Overseas	6.4	6.4	2.9	2.9	1.0	1.0	1.5	1.5	1.2	1.2	1.5	1.5	2.1	2.1

Appendix V: Performance of Irish Pension Funds, 1989-2000

	1995		1996		1997		1998		1999		2000	
	Segregated & Unitised %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets*	*Segregated & Unitised* %	*Total Assets*	*Segregated & Unitised* %	*Total Assets* %	*Segregated & Unitised* %	*Total Assets* %
Main Asset Groupings												
Fixed Interest & Index-linked	22.0	30.7	22.6	30.2	23.0	27.1	27.2	31.1	21.2	24.5	18.0	22.2
Irish Equities	26.0	23.4	26.2	23.7	27.5	26.7	26.3	25.9	21.1	20.6	19.2	18.9
International Equities	39.7	35.0	36.0	32.4	34.2	31.9	35.8	32.5	47.3	44.7	48.7	45.4
Property & Forestry	8.0	7.0	7.3	6.6	6.3	6.0	6.5	6.1	5.2	5.0	7.0	6.6
Cash	4.1	3.7	7.2	6.5	8.6	8.0	4.1	4.0	4.4	4.5	4.5	4.5
Other	0.2	0.2	0.7	0.6	0.4	0.3	0.2	0.3	0.8	0.8	2.6	2.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**99.9**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total Irish	56.0	61.1	56.3	60.6	57.5	60.4	52.4	55.7	38.7	40.1	34.6	35.2
Total Non-Irish	44.0	38.9	43.7	39.4	42.5	39.6	47.6	44.3	61.3	59.9	65.4	64.8
Within Fixed Interest & Index-linked												
Irish Fixed	78.6	86.2	73.4	82.1	70.9	76.9	56.9	62.4	38.4	41.2	30.8	30.3
International Fixed & Index-linked	16.1	10.4	22.0	14.8	26.3	20.9	41.1	36.1	59.7	57.3	68.6	69.3
Irish Index-linked	5.4	3.4	4.6	3.1	2.7	2.1	2.0	1.5	1.9	1.5	0.6	0.4
Within Irish Equities												
Quoted	99.4	99.4	99.6	99.6	99.5	99.5	99.0	99.0	99.3	99.3	99.0	99.1
Unquoted	0.6	0.6	0.4	0.4	0.5	0.5	1.0	1.0	0.7	0.7	1.0	0.9
Within Property & Forestry												
Irish Property	90.0	90.0	95.5	95.5	96.3	96.5	93.6	94.1	90.4	91.0	86.1	87.1
Irish Forestry	2.5	2.4	1.0	1.0	0.5	0.5	4.7	4.4	3.6	3.4	3.0	2.8
Int. Property	7.4	7.4	3.5	3.5	3.2	3.1	1.7	1.5	5.3	5.0	11.0	10.2
Int. Forestry	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0
Within International Equities												
Equities: United Kingdom	26.3	26.3	27.2	27.2	28.3	28.4	25.8	26.0	22.3	22.1	18.4	18.3
Equities: United States	32.7	32.6	26.4	26.4	32.3	32.1	31.9	31.7	26.5	26.5	30.7	30.6
Equities: Continental Europe	19.9	19.9	23.4	23.4	24.4	24.4	30.8	30.7	34.8	35.0	38.4	38.6
Equities: Pacific Basin	17.3	17.4	17.0	17.0	13.7	13.7	11.0	10.9	16.3	16.3	12.3	12.3
Equities: Other Overseas	3.9	3.9	5.9	5.9	1.3	1.4	0.5	0.6	0.1	0.2	0.2	0.2

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