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Aging populations and increased longevity are putting pressure on retirement savings systems in most developed countries worldwide. Although Europe has many pension structures and age profiles, the retirement systems in some of its largest economies will face several challenges in the coming decades.

On the liability side, a wave of retirees will cause rapid growth in the number of pensioners and an increase in overall pension liabilities. On the asset side, the industry faces one of the toughest investment climates in recent history. Like elsewhere, economic growth in the region has slowed. Capital market conditions have deteriorated, in part, due to the tech market collapse, war and general weakness in world demand. Stock market yields are low, and although pricing multiples have fallen, they remain high compared to historical averages. Bond yields have also declined to near historic lows, providing few choices for income from traditional debt vehicles and little opportunity for appreciation. Given current contribution rates and the likely potential performance of stock and bond investments, pension performance seems unlikely to meet projected funding needs.

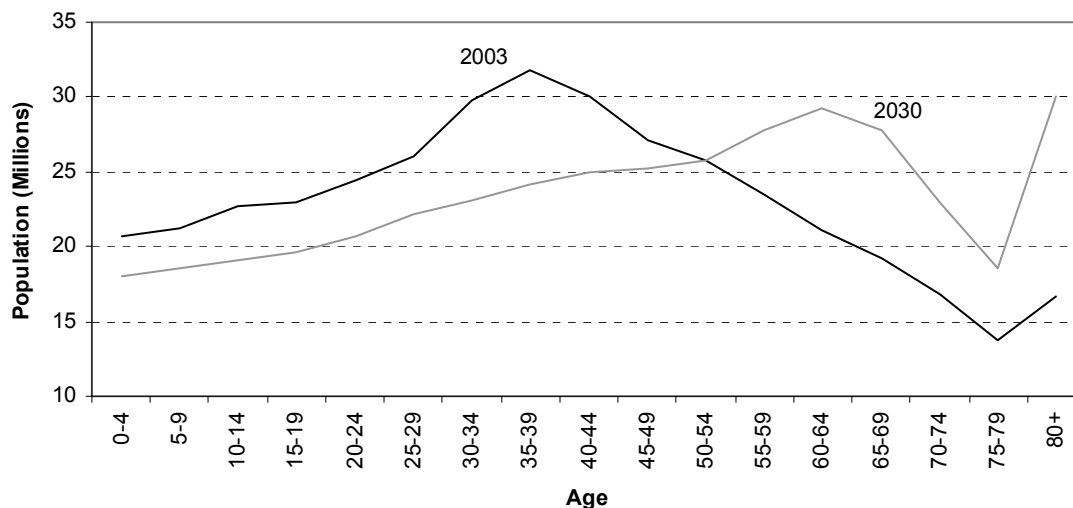
This predicament has not gone unnoticed, and governments are taking important steps to mitigate the problem. Increasing productivity, retirement ages, working hours, labor participation rates, immigration, taxes or contributions are all under consideration. Many local authorities are also making regulatory changes to help ensure pension asset preservation. Regulatory bodies have begun to take a greater interest in asset allocation, and fund managers are increasingly encouraged (either by market conditions or actual regulations) to consider their investments in a portfolio context.

In this context, the benefits of property investment are well known. It provides strong diversification benefits for pension assets, as it has a low correlation with both stocks and bonds, and a consistently high yield, which is beneficial for liability matching. Less well known is that, given the current global investment environment, in many countries property compares favorably to equities and bonds on a total potential return basis. This report shows that, based on some fairly conservative assumptions, property should perform well when compared with other asset classes.

Europe's Graying Society

The aging of the European population is particularly problematic in the more developed Western markets, where pension assets are largest. A dramatic change will occur in Western Europe's age distribution during the next 30 years (see **Exhibit 1**). The median age will increase from 39.5 in 2003 to 46.7 in 2030. At first glance, this may not seem striking, but the devil is in the details. Western Europe will add almost 33 million people age 65 or older by 2030, increasing the current elderly population by more than 50%.

Exhibit 1: Demographic Projections for Western Europe



Source: International Data Base, US Bureau of the Census

The population wave, consisting of those currently ages 30 to 49, will soon be nearing retirement age. This wave, along with increasing longevity and decreasing birth rates, will cause a rapid rise in the elderly population. The macroeconomic impact of this aging is best illustrated by examining the ratio of elderly dependents to the working-age population. Currently in Western Europe, the ratio is about 3.6 working age (ages 20 to 64) people for every elderly person (defined here as age 65-plus, although the retirement age is below 65 in several countries). By 2030, the ratio will have declined to 2.2 workers for every elderly dependent. This contrasts sharply with areas, such as Latin America, where the current ratio is more than nine workers per elderly dependent and will remain over three for the next 50 years. Clearly, many of the Pay-As-You-Go (PAYG) systems in Europe (discussed in more detail later), which largely rely on current member contributions to fund current retiree benefits, will face challenging times if reforms are not enacted.

A Pension Primer and Reform Overview

The aging population has forced a serious reassessment of current pension schemes across Europe. In many cases, today's pension systems are in danger. The reason lies in the structure of most of these systems, which fall into three categories: 1) social security schemes, the state-sponsored PAYG systems, which are the root of most of the potential problems; 2) occupational schemes, also called "2nd pillar" pensions, which are corporate-sponsored savings systems where

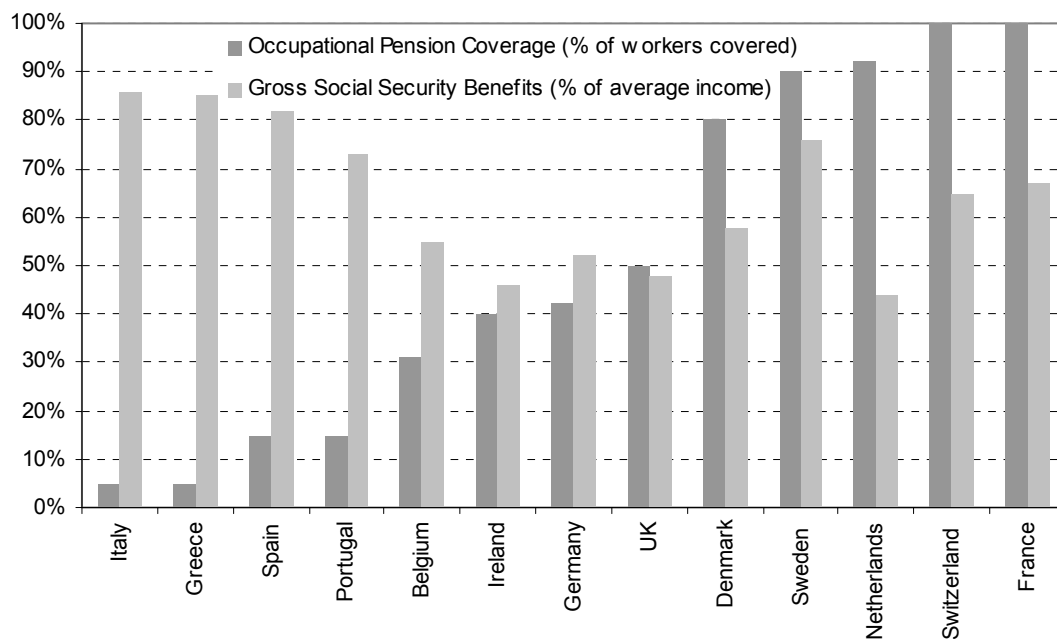
employer and employee contribute to the fund and retirement benefits are paid out from the fund; and 3) individual schemes, usually products offered through life-assurance companies.

Occupational pension scheme development is in its infancy in many European markets. This type of program covers only about one-quarter of the economically active population in the European Union (EU) and is concentrated in a few countries. Individual private savings schemes are difficult to quantify but play a very important role in several countries. In France, for example, the private savings industry is estimated to be worth €1.6 trillion, making it one of Europe's largest.

Most pension schemes in Europe are PAYG systems, which means that contributions from current workers fund the benefits of retired employees. The plans are not substantially funded, meaning they are not required to fully account for the present value of future probable benefit liabilities. Therein lies the problem: an aging population, with increasing demands for retirement benefits, matched with a relatively stagnant working-age population to pay for those benefits. This, compounded with comparatively generous benefit packages, has resulted in continuity risk for the PAYG pension funds.

Exhibit 2 illustrates the problem in several countries. Current gross social security retirement income as a percentage of average income is shown next to the occupational pension coverage in each country as a percentage of the total working population. Not surprisingly, the countries that provide the most generous social security benefits have the lowest participation in and availability of occupational pension plans. As the populations age and begin to strain the economies of the countries that must pay generous benefits, few corporate or individual retirement plans exist to share the burden. Given the ample benefits from the social security schemes, few pensioners have seen the need for supplementary retirement income.

Exhibit 2: Current Benefits and Occupational Scheme Coverage



Sources: Commerzbank Securities; William M. Mercer; OECD

Although **Exhibit 2** highlights countries where the aging impacts may be greatest (Italy, Greece, Spain and Portugal, for example), it hides some important flaws in other countries' systems. Germany has one of the EU's largest projected pension deficits, with a current PAYG liability of \$4.6 trillion over the next 40 years – roughly double the country's estimated 2002 nominal GDP.¹ France offers all employees the option of occupational pensions, but such assets represent only about 5% of GDP.

The pension problem is not being ignored. Administrations are enacting reforms to head off disaster. Although these changes may prevent some of the economic strain, none are politically popular. Governments have or will cut benefits, increase retirement ages, and/or raise taxes or contributions. These reforms, however, do not specifically address the problem but rather “patch” it temporarily and thus defer tackling the true issue. The restoration of retirement security for Europeans can only happen through the expansion of the second and third pension fund types. The burden of retirement savings must be transferred to, or at least shared with, individuals and corporations. This will mean government promotion and regulation of occupational and individual pension programs.

Most countries' reform agendas are following similar paths, with the EU pushing for regional consistency. In the works is a common EU pension market, which would be governed by one set of standards. It would allow the transport of pensions across borders, which would provide greater labor mobility and could permit multinational firms to offer a single EU pension plan. The current differing asset allocations and restrictions among pension systems mean that some countries will have to modify their present regulations. For example, the UK, Netherlands and Belgium allow pension managers a high degree of flexibility in asset allocation, holding the manager to the “prudent person rule.” Germany and France, on the other hand, have much more restrictive guidelines for what is an appropriate pension fund investment and place specific restrictions on certain types of investments, such as the percentage of total assets that can be held in foreign securities.

The details of the reforms will largely determine their impact on the investment markets, but any regional standardization of plans will involve the movement of capital. For example, the funding standards for EU pensions are still in question. The level and composition of required funding will greatly determine the magnitude of the capital flows and the types of assets in greatest demand. A high funding requirement tends to lessen the attractiveness of more volatile investments, such as equities. Numerous other regulatory factors concerning pension funds, such as tax treatment, have yet to be determined. These decisions could materially impact pension investment preference.

Regardless of the details, a relatively large and immediate inflow of investment capital will likely occur. Some analysts suggest that corporate pension schemes could grow from the current €3.5 trillion to more than €17 trillion as early as 2020.² CSFB argues that net institutional investment inflows could reach €500 billion annually over the next 10 years, with perhaps less

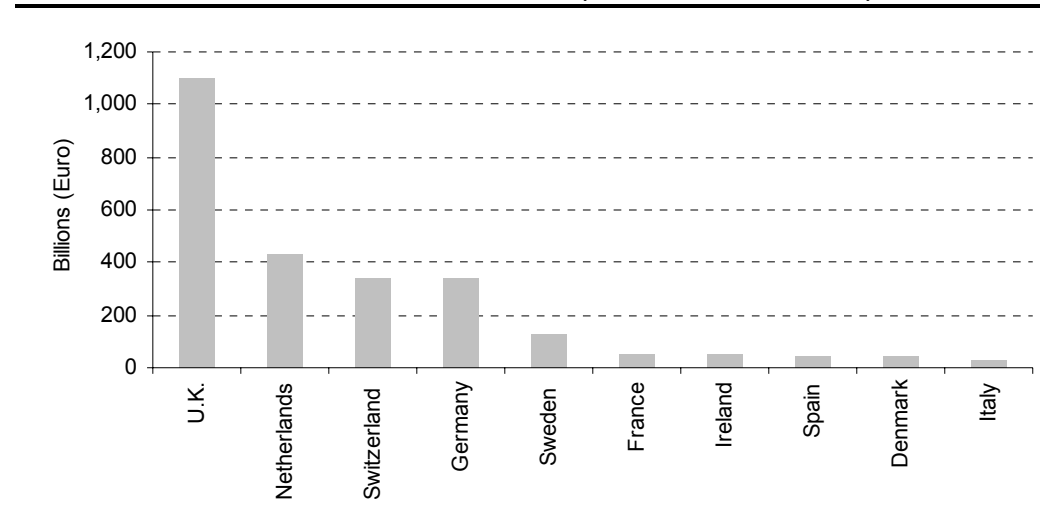
¹ Commerzbank Securities, *Pension Reforms in Europe – Europe's Enron: Implications for equities, bonds and alternative investments*, April 5, 2002.

² *ibid.*

investment in the early years.³ With these inflows, European capital markets will experience dramatic changes. The financial services infrastructure likely will see rapid expansion and development as savings capital enters the existing systems and new systems form. The additional demand for investment vehicles could be substantial.

Attractive investment options for this influx of capital are currently limited. Consider the local traditional investment options in four of the largest 2nd pillar pension markets, as ranked by total pension fund assets in 2nd pillar schemes. The four largest include UK, Netherlands, Germany and Switzerland (see **Exhibit 3**). As the following discussion will illustrate, traditional investment options (stocks and bonds) in most of the developed or developing pension markets provide only limited yield and appreciation potential, especially in light of the potential downside risks. Pension funds that have traditionally concentrated their investments in stocks and bonds will increasingly be forced to consider alternative investments to meet their performance requirements.

Exhibit 3: 2nd Pillar Pension Fund Assets – 2001 (Countries with 30+ Bil. €)



Source: European Federation for Retirement Provision

The United Kingdom

The UK has, by far, the largest base of 2nd pillar pension assets in Europe. It also has the most developed and efficient pension system. Even in the UK, which is probably one of the best-positioned countries to withstand population aging, reforms will be necessary. The pressure for reform recently intensified with the release of the Sandler Review,⁴ which proposed savings reforms, and the subsequent Pickering report,⁵ which focused more specifically on necessary changes in the pension industry. Both suggested broad and difficult transformations in retirement savings policies and programs.

The stress created by an aging population and floundering investment markets has threatened the long-term stability of the system and has prompted legislation to assist in shoring up the plans.

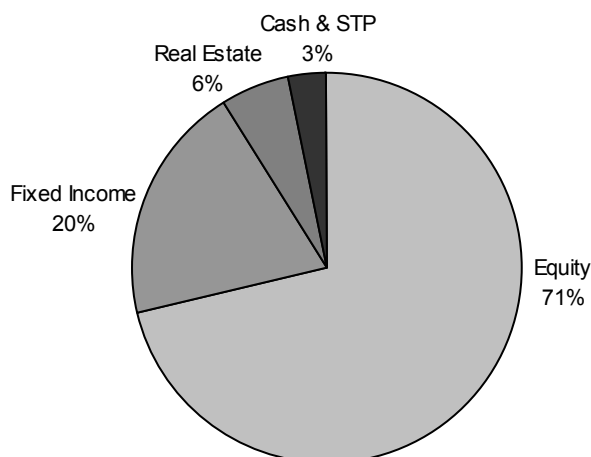
³ Credit Suisse First Boston, *Euro Area Special – Re-centering the debate on pensions*, July 5, 2001.

⁴ Ron Sandler, *Sandler Review: Medium and Long-Term Retail Savings in the UK*, July 2002.

⁵ Alan Pickering, *A Simpler Way to Better Pensions*, July 2002.

This legislation was spurred by the rapid deterioration in funding status, which largely resulted from excessive allocations to equities. Currently, UK pension funds hold a relatively high (almost three-quarters) allocation in equities (see **Exhibit 4**). Equities and fixed income together comprise more than 90% of UK 2nd pillar pension investments. As in most developed markets, UK stocks have fallen precipitously since reaching a valuation peak near the end of 1999.

Exhibit 4: UK 2nd Pillar Asset Allocation – 2001



Source: European Federation for Retirement Provision

The required adoption of the FRS 17 accounting standard, which mandates that companies record the market value of pension fund assets and liabilities on their balance sheets, has made the severity of the underfunding problem all too clear in financial statements. According to the Confederation of British Industry, the FTSE 100 companies face an aggregate pension deficit of close to £100 billion, and UK private-sector nonfinancial corporations face a deficit of roughly £160 billion.⁶ Some estimates put the shortfall as high as £280 billion.⁷

Although the solution to the underfunding problem will be multifaceted, one of the most important aspects will be a reconsideration of asset allocation. The Myners report identifies shortfalls in the current system and suggests a “Code of Best Practice” for UK pension funds.⁸ The report recommends that more attention be focused on strategic asset allocation and that funds consider the full range of investment opportunities, including some of the asset classes usually ignored, such as derivatives, private equity and property.

A recent paper prepared for the Pensions Institute examines the likely consequences of the Myners Report.⁹ It argues that going forward, asset classes will be selected based on their match with liabilities in terms of correlation and volatility rather than simply expected return. In this asset allocation framework, property plays an important role because it has historically exhibited a relatively low correlation to other asset classes and a relatively high correlation to fund

⁶ Confed. of British Industry, “Focus on Investment – The Impact of Pension Deficits,” *Economic Brief*, July 2003.

⁷ Life Insurance International, *Launching a Lifeboat?*, June 24, 2003.

⁸ Paul Myners, *Institutional Investment in the United Kingdom: A Review*, March 2001.

⁹ Dr. David Blake, *UK Pension Fund Management After Myners: The Hunt for Correlation Begins*; Pensions Institute, Birbeck College, University of London, March 2003.

liabilities. Another academic study found that, when considering asset/liability matching issues for mature UK pension funds, optimal asset allocation included about 10% to property in all but the funds with the highest risk appetite.¹⁰

Funds that do not make immediate and meaningful changes in allocation face a particularly challenging investment environment. Even ignoring the benefits of diversification and liability matching, the prospects for investment performance in property are relatively attractive compared with stocks and bonds.

While the outlook for the UK stock market is not bleak, returns likely will not reach the lofty levels of the late 1990s. Between 1993 and 2002, the average annual total return of the FTSE 100 was about 6.6%. Returns ranged from 28.5% in 1997 to -21.5% in 2002. Although total return has seen a wide variation, the yield on the index has remained relatively constant, ranging from about 2% to 5%, with an average of about 3.5%. Relatively volatile P/E ratios have caused wide swings in index value. The P/E ratio reflects a culmination of both the market's changing estimates of earnings and its pricing of risk surrounding these earnings and future earnings growth. From September 1993 through July 2003, the index's P/E ratio ranged from 13.1 to 25.7.¹¹ The yield on the index is now about 3.8%, with a P/E ratio of 20.1%. Given this historical perspective, it is relatively easy to prognosticate the potential performance of the market.

If, over the next 10 years, yields on stocks remain close to their current level, and if annual earnings growth averages 5% (significantly higher than current economic growth forecasts), and if the P/E ratio trends down to its historical average of 18.6, the total annual return to stocks during this period will be about 8%. The base-case scenario is higher than actual average performance over the last 10 years. But, the return may still be shy of the assumptions that many funds currently make regarding the long-term expected return from stocks. For the optimists, we present a scenario where annual earnings growth accelerates to 7% and P/E ratios rise to their historic high of 25.7, in which case total return averages 13.5%. On the pessimistic side, earnings growth is only 2% (roughly equal to forecasted inflation), and the P/E ratio falls to its historic low, in which case the annual total return falls to 1.6%. Based on these historical parameters, UK stock market investing could return from 1.6% to 13.5% annually over the next 10 years.

The outlook for UK Gilts is decidedly worse. Their current yield is about 4.1%.¹² Since 1986, the yield on Gilts has ranged from about 4% to 13%. The average yield over this period was around 7.8%. If yields stay the same, investors in Gilts will earn 4.1%. If, over the next 10 years, yields drop by 110 basis points to 3% (100 basis points below their historic low), the annual return to investors would be about 4.8%. A seemingly more realistic scenario would be for interest rates to rise. If, as a base case, we assume that rates rise to their historic average of 7.8%, the annual return for Gilts will be 1.5%. On the downside, if rates rise to their historic high of 13%, the total annual return would be about -3.8%. Based on historical parameters, Gilts could therefore be expected to return between -3.8% and 4.8% annually over the next 10 years.

¹⁰ Philip M. Booth, "Real Estate Investment in an Asset/Liability Modeling Context," *Journal of Real Estate Portfolio Management*, Vol. 8, No. 3, 2002.

¹¹ Based on month-end index-adjusted P/E ratios as reported by Bloomberg.

¹² Merrill Lynch UK Gilts Index as of June 30, 2003. Macaulay duration has remained between 5 and 8 since 1986 but has been rising. We assume duration of the index stays constant at its current 7.8 over the forecast period.

In the UK, core, ungeared investment in property currently yields about 6.5%. Since 1971, initial property yields have ranged from 4.0% in 1973 to 9.2% in 1992. Over the next four years, inflation in the UK is forecasted to average around 2% annually, which we use as an estimate for long-term inflation and property investment income growth. As **Exhibit 5** illustrates, if property yields fall only slightly to their historic average over the next 10 years, and income growth averages 2%, the effect would be a total return for property investments of 9% annually. In the optimistic case, income growth averages 3%, while yields fall to their historic low, which pushes total annual return up to 14.6%. Even in the pessimistic case, which assumes property yields rise to their historic high and income growth is only 1%, total return is still 4.1%. Thus, property investment in the UK, based on its historical parameters, can be expected to return between 4.1% and 14.6% annually over the next 10 years.

Exhibit 5: Potential 10-Year Annual Returns of UK Investments

	Base	Optimistic	Pessimistic
Stocks	8.0%	13.5%	1.6%
Bonds	1.5%	4.8%	-3.8%
Property	9.0%	14.6%	4.1%

Sources: Bonds-Merrill Lynch UK Gilts Index as of Aug. 19, 2003, modified duration of 7.8 years; Stocks-FTSE 100 Index as of Aug. 5, 2003; Property-IPD UK Property Index as of 2002

In addition to its favorable diversification and liability matching attributes, property compares quite favorably to the traditional asset classes based solely on return potential. UK funds with an excessive allocation to equities should consider diversifying their asset allocation using alternative investments, particularly property, in the current investment environment.

The Netherlands

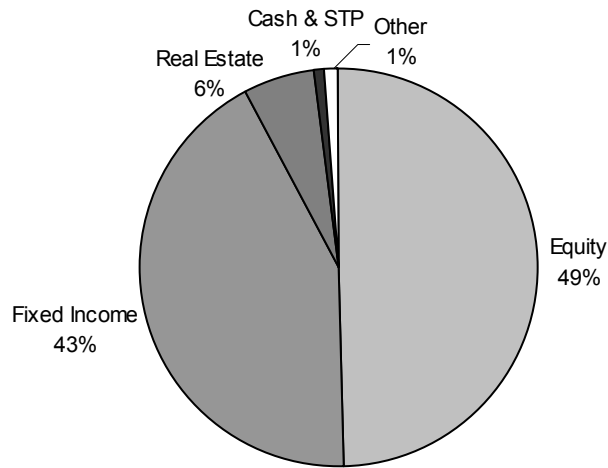
The Netherlands also has a relatively developed pension market, with challenges similar to those in the UK. Dutch 2nd Pillar pensions have a more diversified asset allocation than those in the UK, with only 49% in equities (see **Exhibit 6**). Like the UK, however, equities and fixed income combined comprise more than 90% of the funds' investments. This is despite property's proven portfolio benefits for Dutch pensions. Van Erp finds that investing 10% to 15% in private property is justified due to the diversification potential and decreasing shortfall probability.¹³ In the current market environment, this high degree of allocation to stocks and bonds may present a risk to achieving fund return targets.

As in the UK, the outlook for the stock market in the Netherlands is not unpromising, but returns are unlikely to achieve the heights seen in the late 1990s. From 1995 through 2002, the average annual total return of the Amsterdam Exchanges Index (AEX) was roughly 9.5%. The Dutch equities market exhibited slightly more volatility than that of the UK. Returns to the AEX ranged from -36.3% in 2002 to 43.7% in 1997. The yield on the index has averaged 3.4% since September 1996, with the current yield around 3.5%. The AEX's P/E ratio, which has been relatively volatile, has caused wide swings in the index value. From March 1997 through June

¹³ Van Erp, A. P., "Onroerend goed in de beleggingsportefeuille van een pensioenfonds," 1998 thesis for the University of Tilburg, carried out at ING Investment Management, referenced in *The Role of Real Estate in a Balanced Portfolio*, ING Real Estate Investment Management, November 2001.

2003, the P/E ratio of the index ranged from 9.4 to 26.2.¹⁴ The yield on the index is now about 3.5%, with a P/E ratio of 14.0.¹⁵

Exhibit 6: Netherlands 2nd Pillar Asset Allocation - 2001



Source: European Federation for Retirement Provision

If yields on Dutch stocks stay near their current level, earnings growth averages 5% (significantly higher than near-term projections for growth in real GDP), and the P/E ratio moves up to its historical average, the total annual return to stocks in the next 10 years should be around 11.2%. An optimistic scenario would have annual earnings growth accelerating to 7% and P/E ratios rising to their historic high, in which case total return averages 17.5%. In a pessimistic scenario, earnings growth is only 2% (still slightly higher than forecasted inflation) and the P/E ratio declines to its historic low. In this case annual total return falls to 1.6%. Using these guidelines, stock market investing in the Netherlands can expect to return between 1.6% and 17.5% annually over the next 10 years, a relatively wide range of outcomes reflective of the market's historical volatility.

The outlook for Dutch bonds, whose yield is about 3.1%, is somber.¹⁶ Since 1986, the average yield has ranged from a high of 9.2% to the current low of about 3.1%, with an average of roughly 6.1%. Given that yields are now at a historic low, substantial value gains from bonds seem improbable. The risk is that yields will rise. If yields remain the same, investors will earn 3.1%. If, in an optimistic case for bond investors over the next 10 years, bond yields fall by 110 basis points to 2%, bonds would return about 3.6% annually. In our base case, we assume rates increase to their historic average of 6.1%. In this case, the annual return would be 1.6%. However, if rates rise to their historic high, total annual return would decline to about -0.1%.

¹⁴ Based on month-end index-adjusted P/E ratios as reported by Bloomberg.

¹⁵ Estimates based on Aug. 5, 2003 values as reported by Bloomberg.

¹⁶ Merrill Lynch Dutch Governments Bond Index as of June 30, 2003. In general, Macaulay duration has remained between 4 and 6 since 1986. To simplify, we assume duration of the index stays constant at its current 5.4 over the forecast period.

Exhibit 7: Potential 10-Year Annual Returns of Netherlands Investment

	Base	Optimistic	Pessimistic
Stocks	11.2%	17.5%	1.6%
Bonds	1.6%	3.6%	-0.1%
Property	7.9%	11.5%	4.0%

Source: Bonds-Merrill Lynch Dutch Governments Bond Index as of June 30, 2003, modified duration of 5.4 years; Stocks-AEX Index as of Aug. 5, 2003; Property-IPD Netherlands Property Index as of 2002

Based on data from IPD, core, ungeared investment in Dutch property now yields about 6.4%. The historic data for property investment in the Netherlands is limited, but in general yields have remained between 6% and 9%. Inflation in the Netherlands is projected to average around 1.5% annually over the next four years.¹⁷ We use this as an estimate for long-term inflation and property investment income growth. If property yields remain constant over the next 10 years and income growth averages 1.5%, then total return for property investments would be 7.9% annually. Our optimistic case shows income growth averaging 2.5%, while yields fall by 140 basis points, which raises total annual return to 11.5%. Even in the pessimistic case, which assumes property yields rise 260 basis points to 9%, and income growth averages only 1%, annual total return still averages 4%.

While the Dutch stock market's potential seems more attractive than that of the UK, a very wide range of outcomes is possible, reflecting the higher historic volatility of the market. Property return potential, while lower on the base and optimistic cases, has a much tighter range of potential outcomes. Also, the outlook for property investing compares quite well with that of bonds. In fact, the pessimistic return for property is higher than the optimistic return for bonds.

Germany and Switzerland

Pension funds in Germany differ from those in the UK and the Netherlands in that they hold a relatively high fixed-income allocation and a limited allocation to equities.¹⁸ The current yield on German bonds is around 3.1%, near a historic low.¹⁹ About the best that local bond investors can realistically expect is stability in yields, with the risk that rates rise. If, during the next 10 years, German bond yields decline by 110 basis points to 2%, the annual return to investors would only be about 3.6%. On the other hand, if rates rise to their historic average of 5.8%, the annual return for German bonds would be 1.7%. On the downside, if rates rise to their historic high of 9.2%, the total annual return would be about -0.3%. The stock market outlook is better but not outstanding. A substantial portion of the upside has already been realized in the first half of 2003. The DAX faces low current yields of around 2.3% and limited upside on pricing, with a current P/E ratio of 20.5 versus a historic average of 22.7.²⁰

Property again compares very favorably with stocks and bonds. Based on data from IPD, core, ungeared investment in German property currently yields roughly 6.2%, double the yield

¹⁷ Country Indicators, Economist Intelligence Unit, September 2003

¹⁸ Most recent data available from European Federation for Retirement Provision was 1998.

¹⁹ Merrill Lynch German Federal Governments Bond Index as of June 30, 2003. In general, Macaulay duration has remained between 4 and 6 since 1986. To simplify, we assume duration of the index stays constant at its current 5.6 over the forecast period.

²⁰ Yield on the DAX as of Aug. 5, 2003 as reported by Bloomberg.

available on bonds. The historic data for property investment in Germany is limited to 1996 to 2002, but in general yields have remained between 6% and 7%. Inflation in Germany is forecasted to average about 1% annually over the next four years, which can be used as an estimate of property investment income growth. If property yields remain constant over the next 10 years, and income growth averages 1%, total return for property investments would be 7.2% annually. In the optimistic case, income growth averages 2.0%, while yields fall by 120 basis points, which lifts total annual return to 10.4%. Even in the pessimistic case, which assumes property yields rise 200 basis points (far beyond their recent historical high) to 8.2%, with no income growth, total return is still 3.4%, about the same as the optimistic case for bonds.

In Switzerland, pension fund performance is also in danger. Data from the Association of Swiss Pension Funds suggests that about 43% of Swiss occupational pension schemes are underfunded.²¹ Asset allocation of Swiss 2nd pillar funds is similar to that of the Dutch funds, with almost 90% of investments in equity and fixed income.²² This asset allocation does not bode well for fund performance. The SMI Index currently yields around 1.7% and has a P/E ratio of 18.5. The P/E ratio has ranged from 11.5 to 28.0, averaging about 19 over the last nine years. If earnings grow 5% annually and the P/E ratio trends to its historic average, the total return for Swiss stocks would be approximately 7%. On the upside, assuming higher earnings growth and the P/E rising to its historic high, stock returns will be roughly 13%. On the downside, with earnings growth of only 3% and the P/E ratio dropping to its historic low of 11.5, stock returns are basically flat.

Swiss bonds do not hold much promise. Their current yield is around 2.1%.²³ Since 1986, the average yield on Swiss bonds has ranged from its current low of 2.0% to 7.3%, averaging 4.3%. Even if yields drop by 110 basis points to 1%, the annual return to investors would only be about 2.8%. If rates rise to their historic average of 4.3%, the annual return for Swiss bonds will be 0.6%. If they rise to their historic high of 7.3%, the total annual return would be about -2.0%.

Prime office property yields in Zurich are now about 4.8%, among the lowest in Europe, but still substantially higher than the average yield available on Swiss bonds.²⁴ Since 1990, yields on Swiss property have remained between 4% and 6%. Inflation in Switzerland likely will average around 1.1% annually over the next four years, which we can use as a base-case estimate for long-term inflation and property investment income growth.²⁵ If property yields rise slightly to 5% over the next 10 years, which is close to their historic average since 1990, and income growth averages 1.1%, then the total return for property investments would be 5.3% annually, outperforming bonds in even their most optimistic case. In the optimistic case for property, income growth averages 2.5% while yields fall to 4% (close to their historic low), which pushes total annual return up to 9.0%. Even in the pessimistic case, which assumes property yields rise to their recent historic high (6%) with only 0.5% annual income growth, total return is still 2.9%.

²¹ "ASIP says 40% of Swiss Schemes Underfunded," IPE.com, June 3, 2003.

²² European Federation for Retirement Provision, 2001.

²³ Merrill Lynch Swiss Govt. Bond Index, June 30, 2003. In general, Macaulay duration has remained between 4 and 7.3 since 1986. We assume duration of the index stays constant at its current 7.3 over the forecast period.

²⁴ CB Richard Ellis, "Zurich Office Market," *Office Market Index Brief*, Q4 2002.

²⁵ Country Indicators, Economist Intelligence Unit, September 2003

Based on our assumptions using historic pricing data and projected economic performance, property's base-case return (5.3%) over the next 10 years is lower than the base case for stocks (7.0%), but the range is roughly half that of stocks. Stocks could return between 0% and 13%, while property returns are more likely to be between 2.9% and 9.0%. On a return-per-unit-of-risk basis, property compares very favorably to stocks. Compared with the Swiss bond market, property easily outperforms. Swiss bonds have a low current yield of less than half that of property investments. Based on historic averages, very little upside potential exists. Swiss property returns dominate bond returns by at least 4 percentage points in the base, optimistic and pessimistic scenarios.

Regional Recap

Across four primary European economies, we compiled reasonable optimistic, pessimistic and base-case return scenarios using historical parameters for the primary return determinants of the domestic stock, bond and property markets. In general, these base-case scenarios involved assuming “reversion to the mean” for investment pricing, along with some conservative assumptions about inflation and economic growth. In stocks, the base-case scenarios typically involved yields remaining at the current level, earnings growth roughly equal to forecasted real GDP growth and P/E ratios trending to their historical average. In bonds, the base case assumed yields trend to their historical average. In property, income growth is assumed to equal forecasted inflation, and yields are assumed to trend toward an estimated historical average.

Exhibit 8: Potential 10-Year Annual Returns

	Base	Optimistic	Pessimistic
United Kingdom			
Stocks	8.0%	13.5%	1.6%
Bonds	1.5%	4.8%	-3.8%
Property	9.0%	14.6%	4.1%
Netherlands			
Stocks	11.2%	17.5%	1.6%
Bonds	1.6%	3.6%	-0.1%
Property	7.9%	11.5%	4.0%
Germany			
Stocks	8.4%	14.6%	0.6%
Bonds	1.7%	3.6%	-0.3%
Property	7.2%	10.4%	3.4%
Switzerland			
Stocks	7.0%	13.2%	-0.1%
Bonds	0.6%	2.8%	-2.0%
Property	5.3%	9.0%	2.9%

Sources: Merrill Lynch Government Bond Indices; FTSE 100 Index; AEX Index; DAX Index; SMI Index; IPD Property Indices; Bloomberg; CB Richard Ellis; Prudential Real Estate Investors

As **Exhibit 8** illustrates, in these base case scenarios, property provides a very competitive potential average annual total return over the next 10 years in all four countries. On average,

property's base-case 10-year average annual total return is only 130 basis points lower than that of stocks and exceeds the average annual total return for bonds by about 600 basis points.

While the base-case scenarios provide a good benchmark for near-term potential performance based on history, they may not accurately incorporate some important trends that may impact performance in the longer term. For example, this exercise may beg the question of how the forecasted population changes between 2010 and 2050 will impact the outlook for the property sector relative to other asset classes, stocks in particular. In the longer term, an aging, and eventually declining, population seems likely to put downward pressure on returns across virtually all asset classes in Europe, as it has in Japan. The pessimistic return scenario is useful as a tool for comparing potential downside scenarios over the intermediate term across the primary asset classes.

Historically, property returns have been less volatile than those of stocks; therefore the range between potential optimistic and pessimistic return outcomes for property is narrower than that of stocks. While property has an appreciation component associated with changing potential for income growth, the volatility of this appreciation is not as high as that of stocks. Local stock market returns are largely driven by changes in P/E ratios, which in turn are influenced by corporate earnings expectations and the risk surrounding these earnings. Corporate earnings are much more volatile and harder to predict than income from property.

While it may not always hold true, generally, in areas with declining populations, it seems reasonable to expect decreasing economic activity and corporate earnings, or at least declines in earnings growth, which should translate into more conservative stock market valuations. The same scenario is likely in the property market, but to a lesser degree. The demand for property is inherently tied to population, employment and income trends. With property, however, more of the projected total return is driven by yield. Property's relatively high yield causes its outperformance in the pessimistic case and makes its returns potentially less affected by population trends. Even if potential income growth from property were affected to the same degree as earnings growth for stocks, the aggregate effect on property returns would not be as dramatic due to the insulation provided by the higher yields. Also, the aging population profile and expansion of pension liabilities may translate into greater relative demand for income investment vehicles, which could provide support to property values.

Summary

Undoubtedly, important changes are coming quickly to Europe's retirement savings industry. Across the region, retirement systems face structural reforms. Many countries' 2nd pillar pension systems must be created or expanded and promoted. In countries with developed 2nd pillar systems, reforms are necessary to ensure the long-term viability of the systems. In general, all European pension schemes will be forced to reexamine their benefit payouts and consider increasing fund contributions. The final component of reform that has not drawn much attention is portfolio management, but this is changing.

Standards that promote, or even mandate, strategic asset allocation are becoming more common. Funds are increasingly under pressure to consider investment in a portfolio context, and thus are giving more serious consideration to alternative investments. The existing defined-benefit

pension funds in Europe have historically maintained a relatively small allocation to property. With few exceptions, most countries' funds hold 10% or less. As new regulations and standards of best practice emerge, funds will increasingly consider broadening their exposure to alternative investments, particularly property.

Property presents the new and expanded pension schemes with a unique asset class. It provides a relatively high and stable income yield, which should be attractive to pension funds for liability-matching purposes. Property also compares favorably with stocks and bonds on a total potential return and return-to-risk ratio basis. As noted, in the UK, Netherlands, Germany and Switzerland, yields and potential total returns for property investing are higher than those of bonds. Also, as government bond issuance declines through the transfer of retirement liabilities to the private sector, government debt securities may become more difficult to obtain and possibly even less liquid. As the population ages and its preference for investment income and stability increases, the demand for income-producing securities in individual savings schemes will increase. This may put upward pressure on bond prices and keep yields low, fostering the need for alternative, higher-yielding pension investments for liability matching purposes.

While the outlook for the various national stock markets in Europe is not bleak, achieving returns comparable to those of the late 1990s is not likely. As local economies have struggled, the potential for earnings growth has fallen. Also, P/E ratios are near historic averages, so the possibility of price increases related to multiple expansion is muted. The likely payouts for investing in equities are not as high as the additional risk associated with the range of possible outcomes, depending on which direction earnings and multiples head. In the current environment, property compares favorably with stocks on the basis of return per unit of risk.

Finally, property has a low correlation with the traditional asset classes. Adding or increasing property allocations can raise the overall efficiency of a pension investment portfolio. In addition, the continued integration of countries in the EU will tend to increase the cross-country correlation of the stock and bond markets. This will reduce the diversification benefit that funds have enjoyed while pursuing international investments in the past. Property performance is, and will continue to be, locally driven, and will become an even more important source for international diversification of institutional investment portfolios.

In summary, property has the right characteristics to meet the goals and objectives of long-term, income-conscious investors. Thus, property investment should increasingly become a vital component of the reformed retirement savings schemes in Europe.

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