Asset Meltdown in Europe : a Probability Assessment

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The ageing of the baby boomer generation lies at the heart of the asset meltdown hypothesis. Today, the number of savers (defined as people aged between 40 to 60 years) as a percentage of the total population stands at a peak of 27.6% in the US. The share of the 'dissavers' (defined as people aged 60+) stands at 16.7%. In 20 years, this situation will have been reversed and dissavers will outnumber savers. The question therefore is: will this lead to an asset meltdown *(section 2)*?

1. OVERVIEW AND CONCLUSIONS

Yes, say Shoven and Schieber, the authors of a controversial study on the subject. Many economists share the view of the authors but there is also a large no camp. Paramount to the asset meltdown hypothesis is the lifecycle hypothesis, according to which retirees sell part of their financial assets so they can maintain their consumption patterns. Studies show however that net financial assets of 60+-families do not decrease, implying that pensioners do not dissave *(section 3)*. If this finding holds up in the future, the asset meltdown theory loses a lot of its power.

But it does not lose all its potency. The fact that pensioners do not dissave has important implications for wealth concentrated in 'private' net financial assets. However, part of the savings is concentrated in occupational pensions. The lion's share of these company pensions is still represented by defined benefit (DB) pensions, with the remaining part being defined contribution (DC) pensions.

With the latter, pensioners are free to do whatever they want. In the current state of play, they tend not to 'consume' these assets. DB pensions however are automatically transferred into annuities once employees retire. This means dissaving will automatically rise as more and more baby boomers stop working. **The conclusion therefore is that a proportion of the financial assets will be hit by 'automatic' dissaving caused primarily by DB pensions. The extent of the asset meltdown is dependent on whether retirees gradually sell their other financial assets (personal financial wealth and DC pensions).**

Is the situation different in Europe *(section 4)*? Notwithstanding the fact that global financial markets are becoming increasingly integrated and an asset meltdown in the US would undoubtedly lead to a crash of the financial market in the rest of the world, we think it may be different. In most European countries, legal pensions account for a far larger part of total pensioner income. But in most European countries – with the exceptions of the Netherlands, the UK and Switzerland – the second pillar is far less developed. **Dissaving by company pensions is not a threat in most European**

markets since assets held in occupational pensions are negligible. On the contrary, initiatives taken in European countries in order to set up a second pillar could very well benefit European financial markets in the short to medium term.

Politicians cannot afford to sit on their hands, since pay-as-you-earn pension debt already amounted to over 100% of GDP in most European countries in 2003. If no measures are taken, total pensions paid will be lower (in real terms) than today. The low inflow in the period 1996-2002 is however not encourageing. Both coverage rates *and* contribution rates need to be increased. **Pension funds reach maturity approximately 40 years after they are implemented. This would mean that in most countries, the second pension pillar would not reach maturity until around 2040-2045.**

With regard to the dissaving argument, which is a central pillar in the asset meltdown hypothesis, **we conclude that for the moment, European retirees tend to dissave neither.** The exception is The Netherlands. Will retirees in other countries start to dissave in the future? This is a possibility that cannot be ignored. The Dutch pension system includes a state pension, but a large part of pensioners' income comes from a company pension. We are under the impression that most European countries are moving in this direction. **If the saving behavior of European retirees changes, we would expect a move in the direction of the Dutch system – i.e., a minimum state pension backed up by a company pension scheme - rather than the other way around.**

In the US, bequests have been shown to be an important reason why pensioners do not spend all their savings. The same is probably true for Europe. Moreover, when baby boomers retire, they might receive an inheritance from their parents. This will make them even less prone to dissaving.
There is however growing evidence that the current generation of retirees are not behaving in the same way as their parents, which might lead to lower inheritances. Bequests will also have to be split between more baby boomers since the ratio of children to parents will be higher than the preceding generation.

What about the mature pension funds in Europe? Will these funds have to start selling their assets to finance baby boomers' pensions? Simulations of the in- and outflows of occupational pension funds are very scarce. We only found / received three simulations for the Netherlands, and none for the other countries with mature pension funds. **These showed that total pension asset held by the fund rise until 2030, after which they stabilize.**

Contributions and payments are of course important. **But since contributions are already smaller than payments, the most important factor for the viability of mature occupational pension funds is the return received on pension assets. A real return on assets of 4% (while the economy is growing at 2%) is needed to stabilize the pension assets at a relatively high level.**

Several factors make a decent return on capital likely, even if baby boomers start to dissave. Initially, the abundance of saving for retirement – driven partly by pension reforms in Europe – will depress the rate of return. Afterwards however, capital will be

needed to make up for the shrinking workforce in the ageing countries. This coincides precisely with the retirement of the baby-boomers, and the time the asset meltdown is supposed to take place.
International diversification is also crucial to ensure a decent return. Financial globalization allows a healthier diversification of non-systematic risk. However, it will probably increase systematic risk, as recent financial upheavals have illustrated. This could lead to possible fluctuations in the short run and temporary problems for pension funds.

For the other European countries (apart from the Netherlands), information is very scarce, with the only exception of a simulation carried out by the OECD. **The fact that few simulations on the evolution of pension funds are available is worrying.** Because of the increasing importance of the second (and third) pension schemes and the increasing number of retirees, the importance of the financial markets in Western societies will continue to grow. **The potential impact on wealth and consumption, if problems arise, is huge. Proper preparation, including a clear plan of action if things go wrong, is, in our view, essential.**

To conclude this report, we look at the impact of ageing on real estate *(section 5)*. Real estate makes up a large part of the wealth of European citizens and rising house prices are closely correlated to consumption patterns.

The illiquidity and less efficient housing market compared to other financial assets, the age-related profile of the demand for housing and the strong home-country bias, make the residential real estate market more vulnerable to an asset meltdown. Mankiw and Weil predict a fall in real housing prices of 47% in the period 1989-2007, but a strong inflow of immigrants and the steep decline of interest rates have prevented this prediction from coming true

But immigration and falling interest rates won't save the day in Europe, where the demographic profile is far less favorable than in the US and where housing prices are no longer low in most countries after the increases over the last couple of years. Is this market ready to crash?

Research done by the Mannheim Research Institute for the Economics of Ageing builds a convincing case against the asset meltdown theory for the residential real estate market in Europe. First, the average size of households in an ageing society tends to shrink. This means that **the rate of decline in the number of households lags behind that of the population by around 15 years. Second, smaller households tend to have a higher floor area per person. And third, rising life expectancy as well as more prosperous young birth cohorts will induce higher demand for living space. This simulation points to a cumulative rise in demand up to 10% for residential housing from 2002 to 2025. Afterwards, depending on which scenario is used (ranging from pessimistic to optimistic), the demand for residential accommodation goes from a decrease of 15% to a small increase between 2025 up to 2050.**

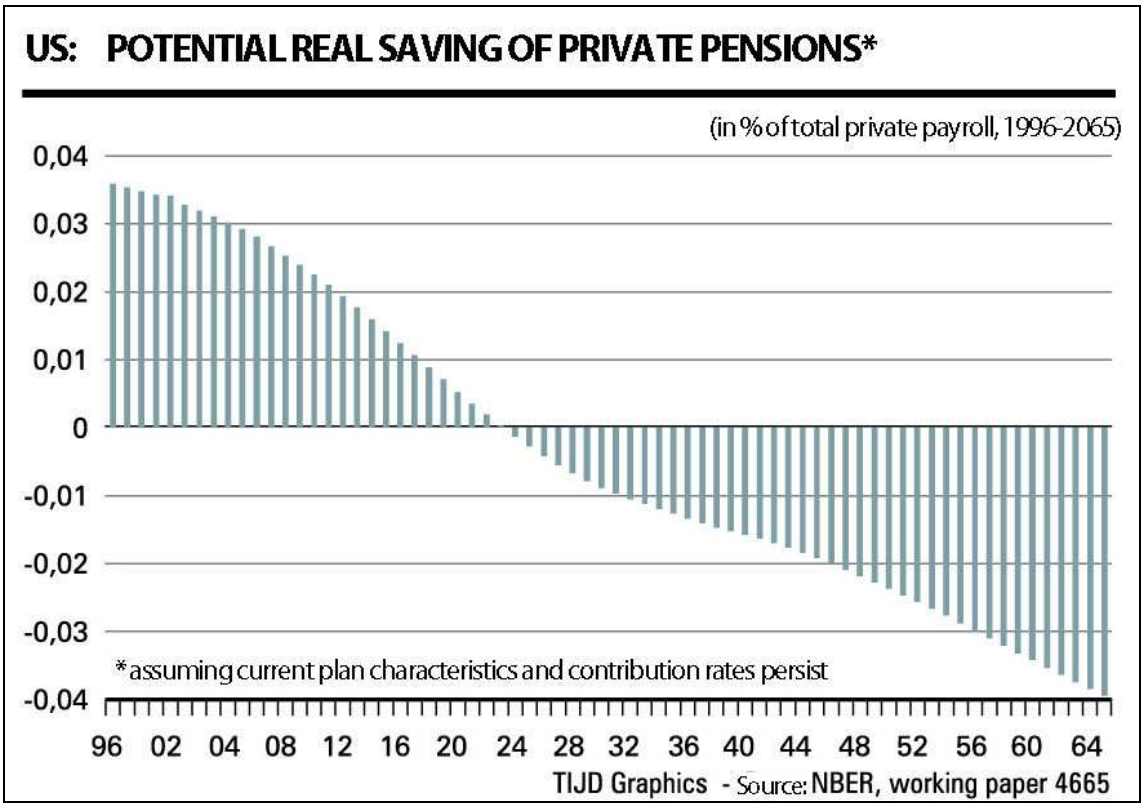
All in all, the evidence so far suggests that the probability of an asset meltdown occurring in Europe is small. However, we conclude that certainly for Europe, much more research on the future evolution of pension funds needs to be

done, particularly when we consider the growing importance of financial markets in European societies.

2. ASSET MELTDOWN: THE THEORY

The ageing of the baby boomers lies at the heart of an asset meltdown hypothesis. Today, the number of savers (defined as people aged between 40 and 60) as a percentage of the total population stands at a peak of 27.6% in the US. The share of the 'dissavers' (defined as people aged 60+) stands at 16.7%. But by 2025, the situation will have been reversed, with the percentage of dissavers outstripping that of savers. Will this lead to an asset meltdown?

Economist Johns Shoven (University of Stanford) and Sylvester Schieber (Watson Wyatt) studied the effect of the in- and outflow of money towards pension funds. Aside from real estate, a large part of the assets of Americans is invested in investment funds.
According to their research, the real net inflow into American pension funds will grow from $120bn a year to a peak of $149bn a year. The real net inflow includes all net contributions plus the return achieved on the assets held by the pension funds, minus payments to pensioners.



From 2010 onwards, the total inflow into the pension funds will begin to slow down. Beginning in 2024, once the majority of the baby boom generation in the US will have retired, traditional defined benefit pension plans may have to begin to sell off assets to pay current benefits to retirees, according to Schieber and Shoven's study. At that moment, the savings of the X-generation – born between 1965 and 1985 – plus the return received on the pension assets will be smaller than the yearly amount of outflow to the retirees. Shares, bonds and other financial assets will therefore have to be sold to pay the pensioners.

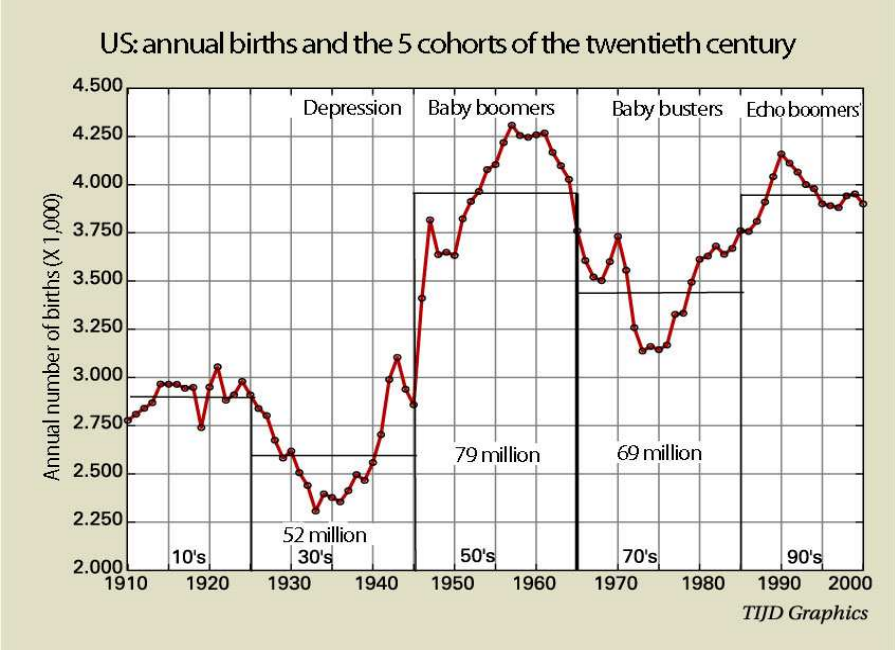
A study by Jan Mantel (2000) of Merrill Lynch more or less confirmed the findings of Schieber and Shoven. According to Mantel, cash flows held by pension funds worldwide will turn negative after 2025. The majority of these assets are contained in only four countries: the US, the United Kingdom, Japan and the Netherlands. They represented 86% of the world's total pension assets in 1999 ($11.1tn out of $13tn total global pension assets).

In the UK, pension funds' net cash flows could fall from a positive 2% of Gross Domestic Product in 2010 to a negative 1% of GDP by 2035. In Japan, pension funds' net cash flows are expected to fall from the current positive 0.50% of GDP to a negative 1% of GDP by 2050. Further in this paper we look more closely at the cash flow evolutions of the Dutch pension funds.

Premises for an asset meltdown

We need two crucial ingredients for an asset meltdown to occur:

1. The difference in size between one generation and the next – dissavers versus savers – must be large;
2. The life cycle hypothesis (Modigliani and Brumberg, 1954) should be valid.

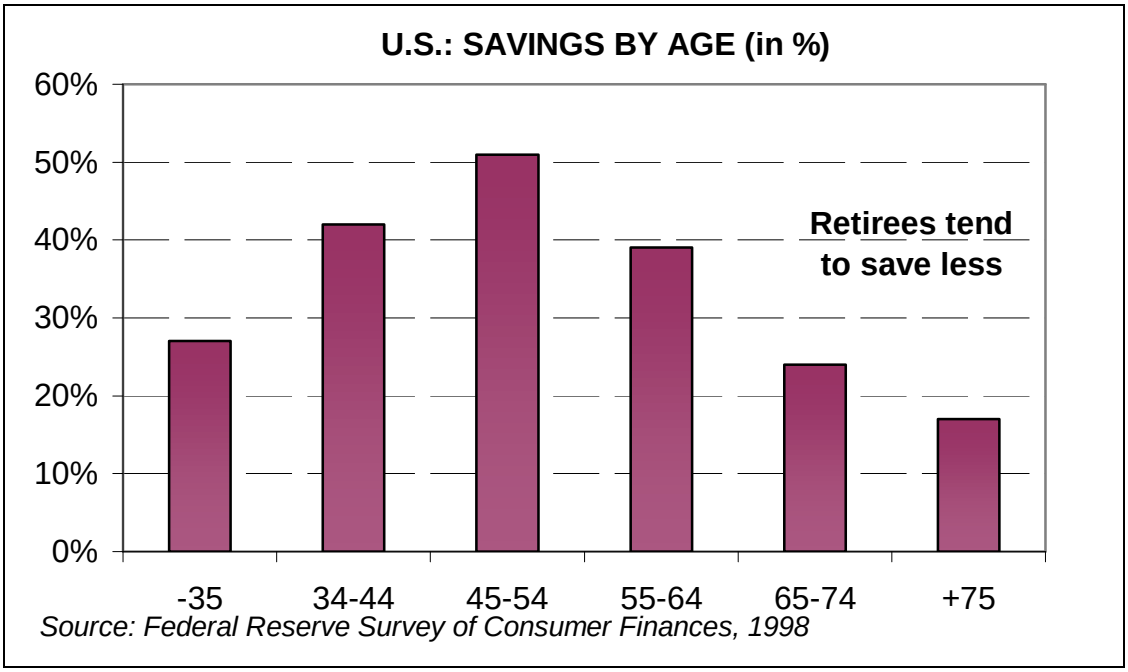


Size of different generations

The first premise looks to be correct. The baby boom generation – born over 1945-1965 and amounting to about 79 million people in the United States – is far bigger than the baby bust generation that followed. The baby bust generation – also called the X-generation – born between 1965 and 1985 – counts around 69 million people. In the US, the difference in size between the generations proves to be correct. For the EU-15, UN data suggests the difference between the two generations also amounts to about 10 million souls.

The life cycle hypothesis

For an asset meltdown to occur, retirees need to save less than active adults. This assumption is crucial to the life cycle hypothesis, according to which people strive to maintain their consumption as stable as possible over their lifetime. When they are young, consumption outstrips earnings. Then, from the age of 35/40, income rises above the rate of consumption and people start to save. When they retire, income falls below the established consumption level and to sustain living standards, they spend down their assets. This is the theory.

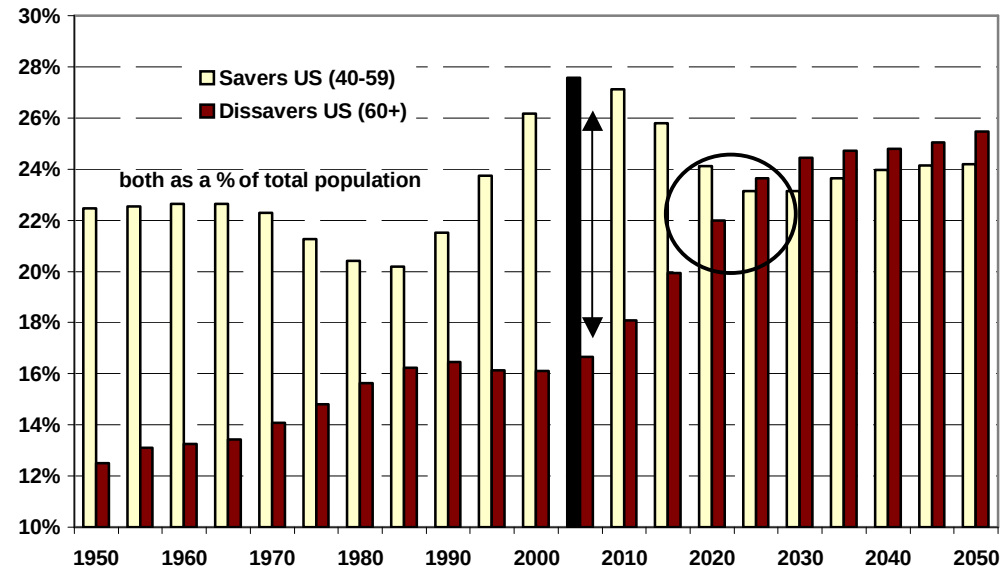


The Survey of Consumer Finances (SCF) provides the most comprehensive information on asset ownership in the United States. The graph above shows the result of savings by age category. The data are in line with the prediction of the life cycle theory, namely that most saving is done by the 34 to 64 age group. The percentage of families that save after 65 falls back on average to around 20%.

Using this as a starting point, we can visualize the demographic evolution in the US between savers and dissavers. Savers are defined as people aged between 40 and 60; while dissavers are people aged over 60.

The difference between the percentages of savers versus dissavers decreased from 1950 to 1980. But between 1980 and 2000, the gap between the two age categories widened gradually, exactly at the time when returns on assets were increasing. In 2005, the gap between savers and dissavers reached an all-time high. From now on the difference will start to diminish to reach a turning point between 2020 and 2025.

U.S.: SAVERS VERSUS DISSAVERS 1950 - 2050

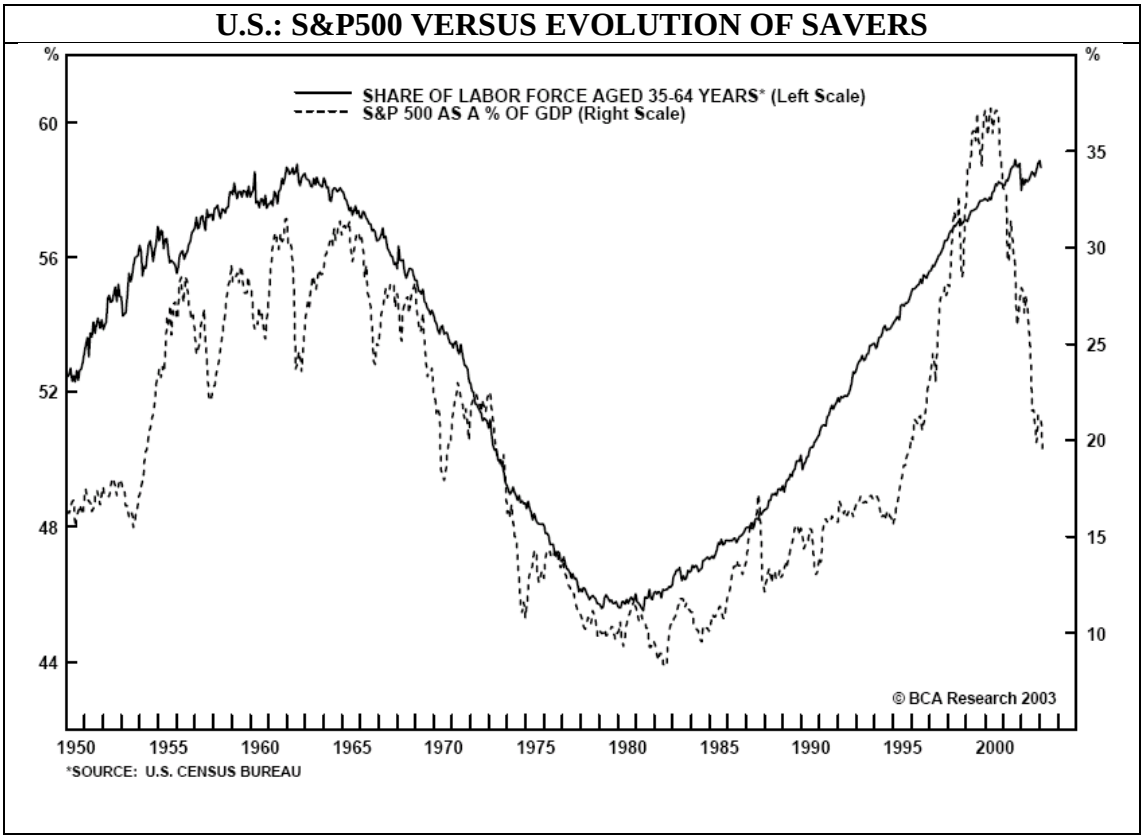


Source: United Nations medium variant, own calculations

3. ASSET MELTDOWN AND THE US

Give me a one-hand economist. All my economists say: "on the one hand … on the other."

President Harry Truman



3.1. Assets are influenced by demographic evolution

The link between demographic shifts and the return on assets has been studied by several scholars. When represented on a graph, the relationship looks very clear in the US. The share of the labour force aged 35-65 (savers) peaked at 1960-1965, when the value of the S&P500 as a percentage of GDP also peaked. From 1960, the share of savers fell back to bottom out around 1980.

After 1980, the share of savers rose again. Each of these movements was reflected in the evolution of the share of the S&P500 in US GDP.

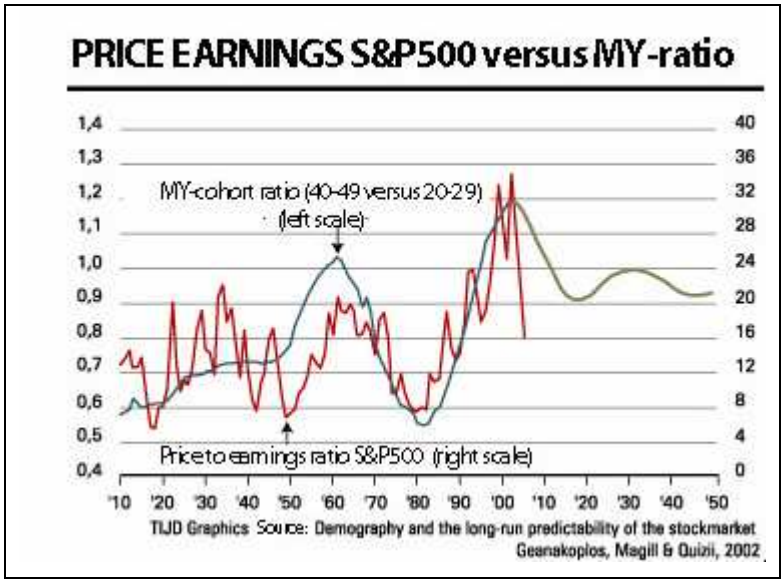
The relation between asset prices and the 40 to 65 age group has been studied for several countries outside the US. Davis and Li (2003) focus on a sample of seven countries with substantial equity markets. They find a

statistically significant influence by the share of the population aged 40 to 64 on the level of real stock prices and bond prices.
Geanakoplos, Magill, and Quinzii (2004) find international evidence for a link between the "Middle-Young" (MY) ratio (ratio 40-49 (savers)/20-29 (dissavers)) and real stock returns. The study covered France, Germany, Japan, and the United Kingdom, and obtained mixed results. For France and Japan, there appears to be a link between the MY ratio and the real price of corporate equities, but the relationship does not emerge in the other countries.

The same authors also checked the relationship between the MY ratio and the price-earnings (PE) of the S&P500. The link turned out to be quite strong. We identify three periods in the graph: A rising ratio and increasing PE over 1940-1960, a decrease for both ratios between 1960 and 1982 and finally an increase from 1982 to 2000, when the baby boomers started to save. The first baby boomer turned 40 in 1985. With 79 million souls, their generation was far bigger than the X-generation (69 million), whose members hit the 20-29-age bracket at around the same time.

The MY-ratio reaches its peak around these days. From now on the X-generation takes over as the biggest saver. The vacancy left by the dissavers is filled by the echo boom generation, the children of the baby boomers. This generation is – in the US at least – almost as big as the baby boom generation, which leads to a falling MY-ratio for the next 20 years.

Note that in their initial study (2002), the authors write: "…our model predicts a decline in the PE ratio from around 30 to a ratio between 7 and 17 for the high-probability states in the next twenty years." In April 2004, a new version of the study was published in which this explicit prediction was omitted. We failed to get an answer to our request for an explanation.



3.2. Assets are NOT influenced by demographic shifts

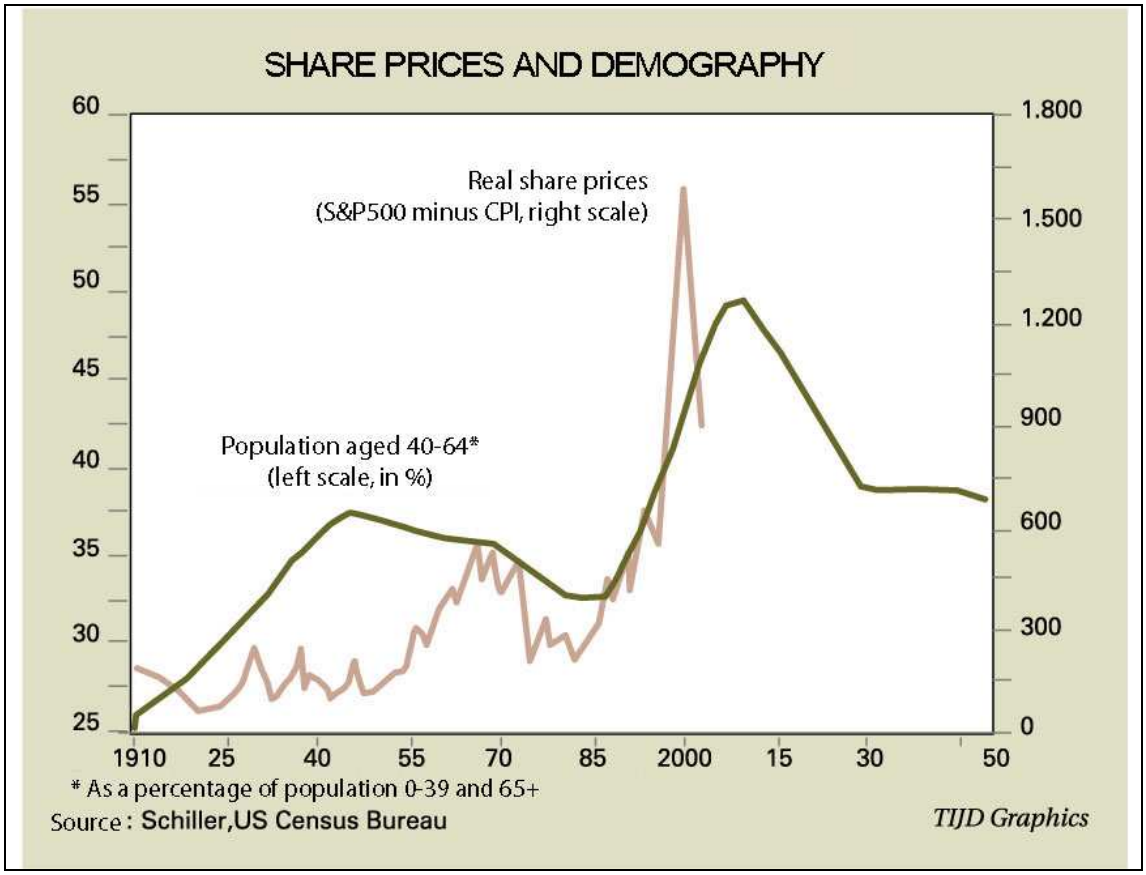
These studies (and others, including Bakshi and Chen, 1994, Yoo, 1994, Macunovich, 1997, Bergantino, 1998 and Brooks 1998) point to a link between demographics and the evolution of asset prices. However, at least as many papers find exactly the opposite: that such a relationship does not exist.

On a macro-economic scale, there is ample evidence supporting the claim that an ageing population saves less. McCarthy and Neuberger of the Centre for Economic Policy Research (CERP) extensively studied the literature. They conclude that the national savings rate, both over time and across counties, is affected by the age composition of the population. For the wealthiest OECD countries, they conclude that a 1% shift of the working population to the pension population would lead to a decline in private saving rates of 0.5 to 0.9 percentage points.

On a micro-economic scale, the results are not as compelling. According to McCarthy and Neuberger, "Evidence from studies of individual households does suggest a significant link between age and saving behaviour, with saving rate being the highest around the age of 50, and generally declining after retirement. There is however little evidence of people running down their savings rapidly in retirement apart from the dissaving implicit in annuities and defined benefit pensions."
Saving versus dissaving

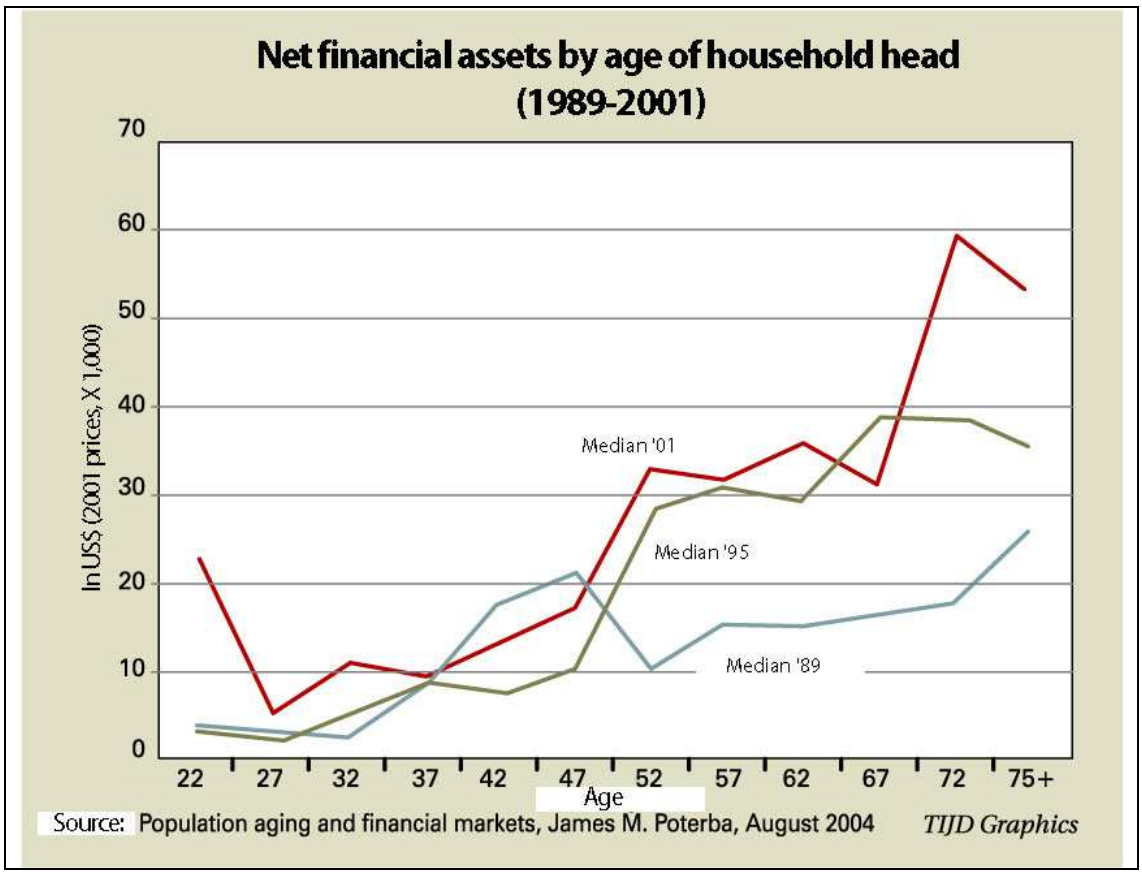
MIT professor James Poterba (2004) shows a weak historical link between population age structure and real returns on Treasury bills, long-term government bonds and corporate stocks. Poterba also shows that the elderly do not dissave.

Poterba sees no clear evidence for a statistically significant relationship between the real rates of return and the age structure of the population over the last 75 years. The strong rise in share prices over the last few decades did indeed coincide with the baby boomers' drift into middle age, but this does not prove a causal relationship.



A look at the above graph shows as well that the link between the saving population and the share price has not always been as clear as it was in the 1960-2000 period. Between 1910 and 1960 in particular, the link between the evolution of real stock prices and the percentage of savers is almost invisible.

More importantly, Poterba uses a US Survey of Consumer Finances to construct age-specific mean asset holdings to show that retirees do not dissave. Wealth, whether measured by common stock holdings, net financial assets or net worth, rises with age, with an apparent peak some time after 50, but with no clear evidence of a decline thereafter.



When this data are used to project asset demands based on the future age structure of the US population, we do not observe a sharp decline in demand between 2020 and 2050. These findings therefore call into question the asset meltdown hypothesis.

Bequests

At present, the reason why retirees do not dissave is linked to uncertainty surrounding bequests and life expectancy. The bequest motive and lifespan uncertainty imply that financial assets may be decumulated more slowly than the standard life cycle hypothesis would suggest. Given increasing longevity and lifetime uncertainty, asset decumulation may be slow and only start at a more advanced age, as retirees seek to ensure that sufficient capital remains available for their entire (uncertain) lifetime.

There may also be intergenerational transfers arising from the bequest motive, although the empirical evidence regarding the relevance of the bequest motive for saving is mixed. On the one hand, Kotlikoff and Summers (1981) suggest that a substantial part of saving by the elderly is driven by bequest motives. On the other hand Bergantino (1998) contradicts this, suggesting that bequests are quantitatively of minor importance. He estimates that less than 25 per cent of households have ever received a substantial inheritance and that the median value of such inheritances was only slightly more than half the median annual income per spouse.

Economists at Goldman Sachs put forward another possible reason why retirees have not shown dissaving behaviour until now. The last two decades of the 20th century were characterized by extraordinarily high returns from the financial markets. The average return on the US stock exchange amounted to 18% from 1982-1999. This might have fully compensated for the liquidation of assets by pensioners. Retirees were dissaving over this period, but the high returns on stock and bond portfolios prevented a fall in the value of total assets. But the odds that these returns will be repeated in the coming decades are very small.

Defined Benefit Plans

Do these findings imply that there will be no pressure on the financial markets once baby boomers retire? No. When Poterba states that retirees are not selling their savings, he focuses on net financial wealth held by families. Wealth included in occupational pension plans is not included! Savings in the defined benefit (DB) pension plans are automatically drawn down as pensioners grow older. Inclusion of DB pension wealth would cause wealth to decline more rapidly with age. It also affects the apparent savings rate.

Income from DB pension plans, like income from annuities, is treated as income for the purpose of computing savings rates. As Miles (1999) argues, the economic reality is that in fully-funded pension plans, pensions are paid in part by liquidating assets. Elderly people living by consuming the income from a pension annuity, and leaving their directly owned financial assets intact appear in the micro data to be neither saving nor dissaving, though in reality they are consuming their pension wealth.

The importance of DB-pension plans should not be underestimated as the table below clearly shows.

IMPORTANCE OF DEFINED BENEFIT PENSION PLANS IN US MARKET

	Market capitalisation US (in billion US $)	Defined Benefit Pensions (in billion US $)	Percentage of Defined Benefit Pensions
1995	8495	2070	24,4%
2000	17566	3366	19,2%
2004 (Q3)	15980	3000	18,8%

Source: J. Poterba, own calculations

When we queried Professor Poterba on this point by e-mail, he replied, “I think [DB-pensions] are the component of the financial market that is most likely to exhibit "meltdown-type" behaviour … because the assets in these funds are mechanically drawn down when the beneficiary population ages. The key unresolved question is how assets that are not in DB-type settings will behave. There the standard lifecycle accumulation and decumulation model comes into play, but of course if households don't draw down the assets very quickly when they are old, the story loses some of its punch.”

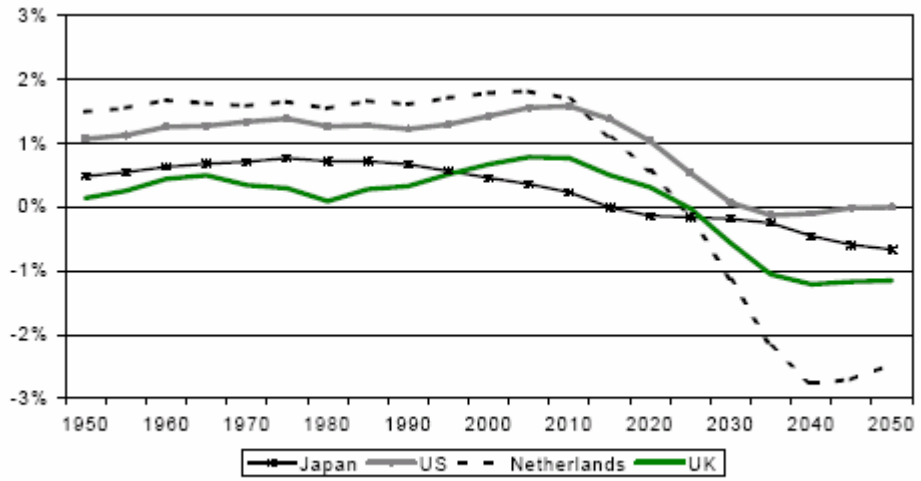
4. ASSET MELTDOWN IN EUROPE

Most research on the possibility of an asset meltdown concerns the US. Of course, an asset meltdown in the US would have dramatic consequences for Europe. Indeed, economic and financial globalization ensures that capital markets will be at least as interdependent in the future as they are now.

Some European countries face the same challenges as the US with regard to a potential meltdown. Jan Mantel found that demand for investments would be strong for the next five to ten years, but that between 2025 and 2035, the net cash flow into pension funds would become negative, forcing the funds to start selling assets. The study also found that in the future, pension funds are likely to hold fewer equities and more fixed income products in their portfolios. This is because as the number of retirees increases relative to workers paying into a fund, they are likely to adopt more conservative investment policies. Merrill Lynch predicts that 10 to 15 percentage points of portfolio holdings will move out of equities in the United Kingdom, the United States, Japan and the Netherlands over the next 50 years.

As populations age, the funded pensions in each of these four countries begins to see a decline in the level of incoming cash flow from 2005 to 2010. Sometime after 2025, each will begin to experience negative cash flow and, in some cases, the drop will be dramatic. The return held on the assets is no longer sufficient to offset the negative gap between contributions versus payments. According to Mantel, in the Netherlands, cash flow goes from just under a positive 2% of GDP in 2010 to cash negative in 2025, and further to a negative 2% of GDP in 2035. The negative impact in the Netherlands is more severe on cash flow than in the other countries, mostly because the Dutch population is ageing faster than the British and the American ones. Also, a higher proportion of the Dutch population has pension coverage, so its impact is greater than in Japan, which, while ageing fast, has a lower proportion of the workforce covered by a pension plan.

PENSION FUNDS NET CASH FLOW (in % GDP, 1950-2050)
Merrill Lynch Baseline Scenario



Source: Merrill Lynch & Co.

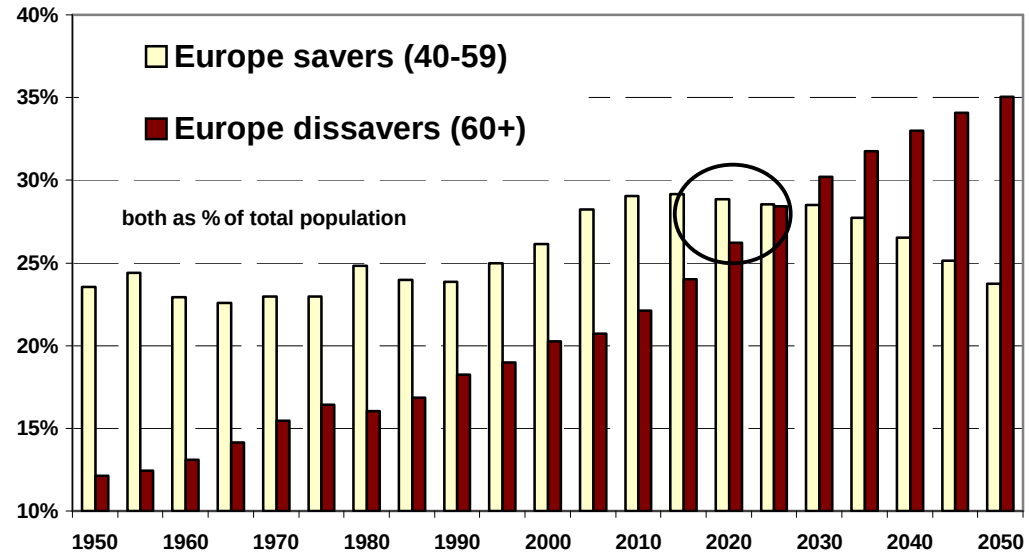
The effect in the US is more benign, but hardly encourageing. Cash flow falls from nearly 2% of GDP positive in 2010 into slightly negative territory sometime after 2035. In the UK, cash flow falls from a peak of nearly 2% of GDP around 2010 to cash flow negative in 2025, then falls further to more than 1% negative in 2035. Note that these studies only include countries with mature pension funds.

Savers versus retirees

Earlier in this paper we saw that the number of savers as a percentage of the population would fall below the number of dissavers in the US by 2020-2025. Between 2005 and 2030, also in the US, the gap between the savers and the dissavers (as a percentage of the total population) swings from +10.9 percentage points (27.6% savers versus 16.7% dissavers) to –1.3 in 2030. According to the asset meltdown theory, this could lead to a net cash outflow, meaning that the pension contributions plus the return on the pension assets would be smaller than the pension outflow.

Europe would initially see a more gradual change, with the gap swinging from +7.5 to –1.7. However in the US the ratio of savers to dissavers stabilizes at around –1 percentage point after 2030. In Europe, the number of savers continues to decline while the number of dissavers keeps rising. By 2050, savers as a percentage of the total population fall to 24%. The percentage of dissavers stands at that moment at 35%, a difference of 11 percentage points.

EUROPE: SAVERS VERSUS DISSAVERS

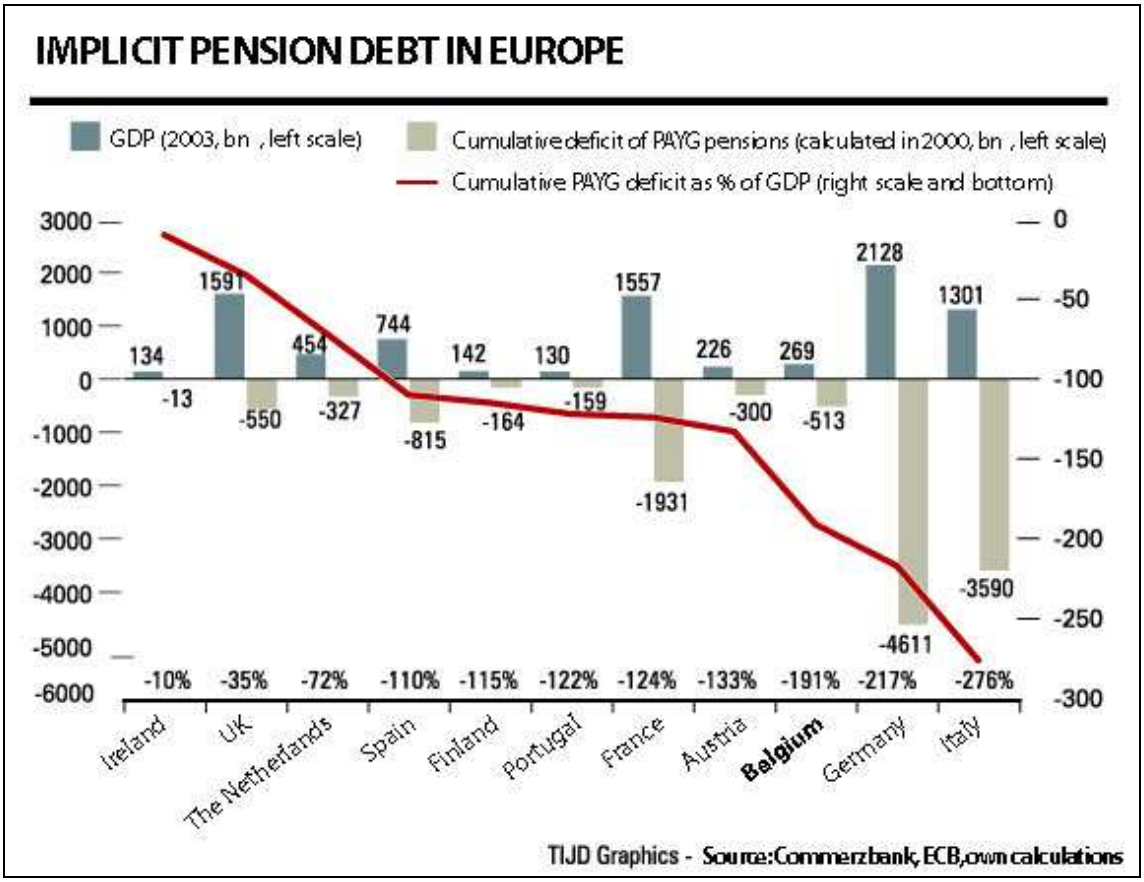


Source: United Nations medium variant, own calculations

In the US the echo boom generation is – in size terms – almost a carbon copy of the baby boom generation. In Europe, however, the birth rate continued to decline after the baby bust generation. As a consequence, Europe's echo boom generation is even smaller than the baby bust generation. We conclude that the demographic profile is far worse in Europe than in the US. The disequilibrium between savers and dissavers is also much bigger in Europe than in the US.

4.1. Immaturity of European pension funds

The immaturity of most of the pension funds in European countries saves the day. Large pension funds like those in the UK, the Netherlands and Switzerland are the exception rather than the rule. Pension assets in the other European countries are low and their citizens tend to be overly dependent on the public PAYG pensions. Most of these countries are starting to realize that without reforms, they will not be able to fulfill their promises concerning future public pension payments. The actual value of the implicit PAYG pension debt was over 100% of GDP in most European countries in 2003.



Pension reforms

But European countries are responding to this challenge. The pushing back of the retirement age is a first important step and the introduction or stimulation of a strong second pillar has also gathered pace in several countries. In Belgium for example, the 'Wet op de Aanvullende Pensioenen' (WAP) was introduced recently in order to democratize the second pension pillar. In Germany, Riester reforms have been introduced to promote 2nd pillar pensions.

Demographic shift will lead to an inevitable decline in public pensions and governments will have to introduce measures to increase inflows into the second pension pillar. If not, there is a chance that total pension payments over a decade will be lower (in real terms) than today. However, future retirees need higher pensions than today since they are in better physical shape (so they still want to be active) and live longer.

PENSION FUND ASSETS (in billion ECU / Euro)					
EU-15	**1996**	**2002***	**2002 GDP**	**in% GDP**	**Average growth (annually) 1996-2002**
Austria	21.05	15.9	218.3	7%	-4.6%
Belgium	8.97	13.37	260	5%	6.9%
Denmark	29.54	42.19	183.7	23%	6.1%
Finland	7.75	11.05	139.7	8%	6.1%
France	76.73	47.4	1520.8	3%	-7.7%
Germany	269.48	354.1	2110.4	17%	4.7%
Greece	2.75	5.05	141.4	4%	10.7%
Ireland	24.2	44.8	129.3	35%	10.8%
Italy	25.3	34.49	1258.3	3%	5.3%
Luxembourg	0.02	0.04	22.4	0%	12.2%
Netherlands	**318.14**	**436.1**	**444.6**	**98%**	5.4%
Portugal	8.18	15.87	129.3	12%	11.7%
Spain	17.54	45.77	696.2	7%	17.3%
Sweden	**86.026**	**116.2**	**255.7**	**45%**	5.1%
UK	**668.47**	**949.6**	**1660.1**	**57%**	6.0%
TOTAL EU-15	**1564.146**	**2131.93**	**9170.2**	**23%**	**5.3%**
*** Luxembourg and Greece data for 1999*					
Annual return 1997-2002: DJ Stoxx 2,7% + Bonds 7,8%; average: 5,3%					
Source: EFRP, ECB, own calculation					

How has the inflow into European pension funds evolved of late? From 1996-2002 it barely grew. Total pension assets grew 5.3% a year on average. The average return on assets (DJ Stoxx, American bonds) was about the same over this period. We conclude that total net inflow was very low over this period.

The EFRP remarks however:

1. European pension funds are mainly investing in Europe (DJ Stoxx and American bonds assumptions need to be corrected to reflect 'European stock market performances');
2. European pension fund assets have decreased by almost 11% over 2000-2002 (= €319.2bn)
3. Due to some changes in definitions, it is very difficult to find a stable time series for European pension funds:
    a. From 2000, data from CNEPS have been included (Mutualities in Spain)
    b. From 2001, the French AGIRC and ARRCO schemes are being excluded
    c. From 1999, data on Luxembourg pension fund assets are no longer available.
4. For the 1995-2000 period, Austrian data on book-reserves systems were overestimated.

Notwithstanding these remarks, the inflow to European pension funds should increase in the coming years. The reasons are plain

to see. The average coverage of pre-funded schemes was estimated in 2002 at around 23% of the European workforce. By 2020 this percentage should rise to 60%, if a target put forward by the European Federation of Retirement Provision is met.

PRIVATELY MANAGED PENSION SCHEMES

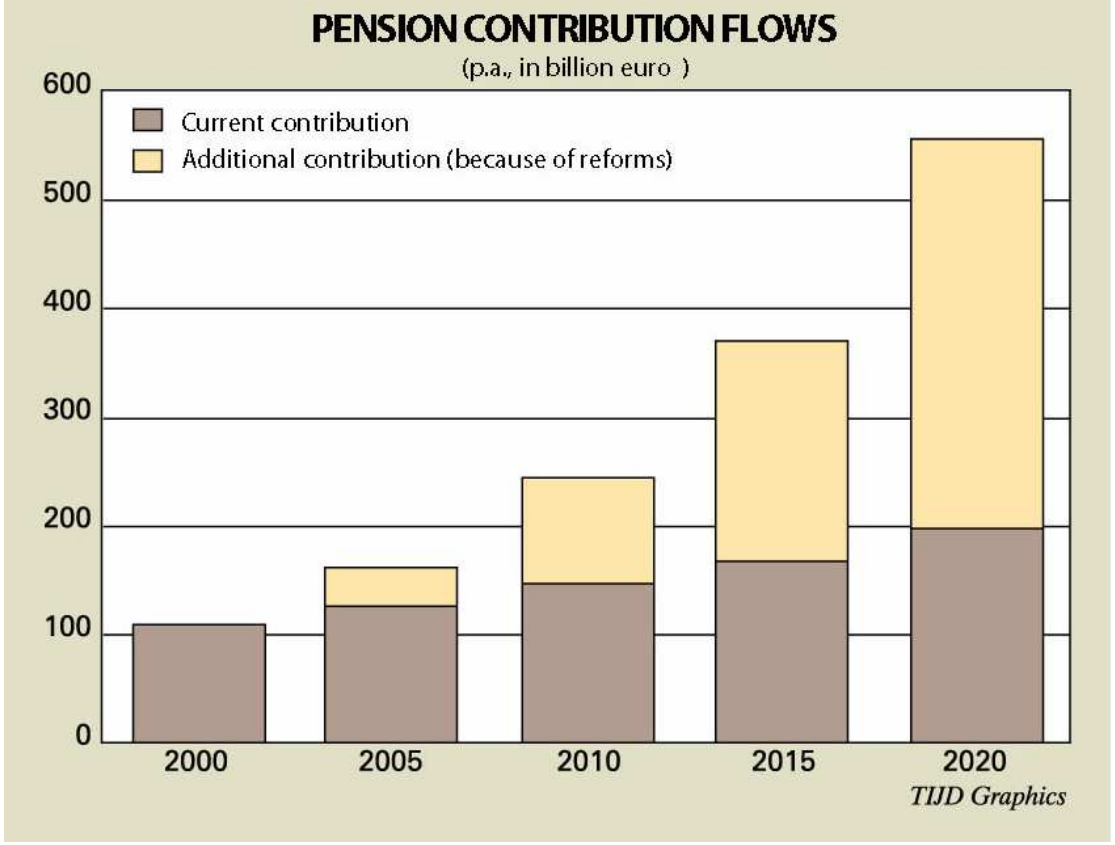
COUNTRY	**ACTUAL**		*FUTURE EXPECTATIONS*	
	Coverage rate	***Contribution to retirees income***	***Coverage rate***	***Contribution to retirees income***
Austria	35% O; 10% I	negligible	=	10% decrease in first pillar RR will be compensated by O and I schemes
Belgium	40-50% O & I	+25% for 20% of retirees	To rise	To rise
Denmark	95%	+24% income before tax	Increase slightly	+50% by 2045
Finland	7% O; 15% I	+ 6 to 7%	=	Increase slightly
France	10% O; 8% LI	+3%	=	na
Germany	57% O; 13% I	+6% O; +9% I	To rise	O & I: +6.3% in 2010; +10.3% in 2030; +12.8% in 2050
Greece	na	na	na	na
Ireland	52% O&I	+22% I	70%	RR provided by O&I: 16%
Italy	8% O; 2% I	negligible	To rise	RR provided by O&I: 16%
Luxembourg	20% O; 5% I	na	=	na
The Netherlands	90%	+34% income after tax	Increase slightly	+50% income after tax
Portugal	4% O; 1,5% I	+8%	=	na
Spain	10% O; 40% I	na	na	na
Sweden	90% O; 50% I	+18%	=	na
UK	43% O; 16% I	+30%	Increase slightly	Increase slightly

O: occupational pension schemes; I: individual pension schemes; LI: life insurance for retirement
RR: replacement rate
Source: Privately Managed Pension Provision (2005, EC)

In reality though, we still are a long way from reaching these levels. Consequently, the contribution of private schemes to retiree pension income is very low in most European countries. Only in five countries (Denmark, Sweden, UK, The Netherlands and Ireland) does income from occupational pensions and individual pension schemes make up around 20% or more of retirees' net income. These are alarming statistics in view of the decreasing average replacement rates of the PAYG pensions in most, if not all, European countries.

Inflow until reaching maturity

The data may be alarming, but they strengthen the arguments of those who believe an asset meltdown in Europe is not probable. Two of the five biggest European countries – Italy and Spain –have hardly any pension assets at present, while the situation in France is unclear. In Germany, occupational pensions contribute well below 10% to retirees' income.
Apart from Denmark, Sweden, the UK, The Netherlands and Ireland, all European countries will have to take rapid measures to (1) increase the coverage rate and (2) increase the share of occupational (and individual) pension schemes in retirees' total income. According to a study by the Ingenue Team, if contribution rates stay at the level they reached at the end of the 20th century, replacement rates could fall by 50% by 2050.
That is why in many EU Member States, asset levels of private pensions are expected to increase enormously (see table). According to a study by Commerzbank, the steady increase in inflow could be huge. For 2000, Commerzbank estimated the yearly inflow at €100bn a year. On the back of the pension reforms implemented in the different European countries, inflow could grow to about €550bn a year by 2020.



Source: Commerzbank, Pension reforms in Europe, April 2002

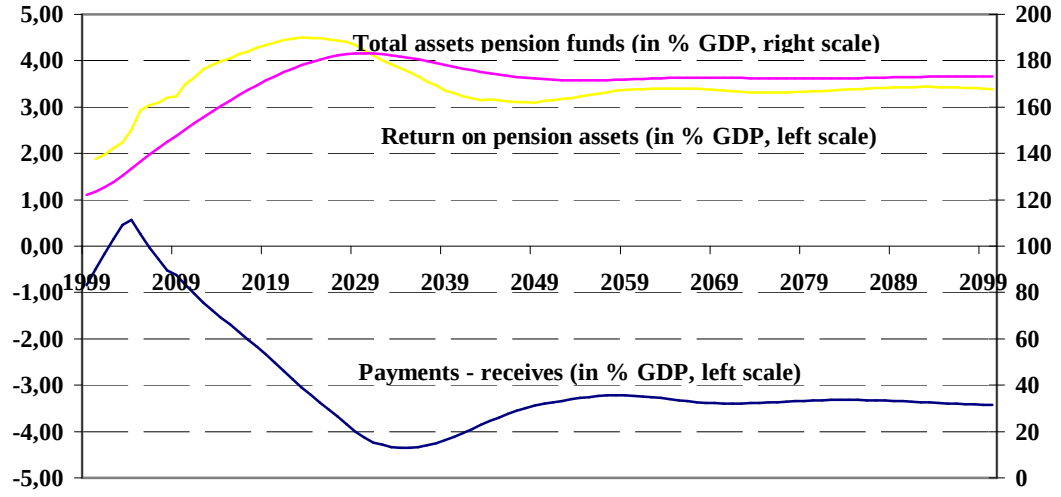
And beyond 2020? Pension funds reach maturity approximately 40 years after they are implemented. This would mean that in most countries the second pension pillar would mature around 2040-2045. Of course, much depends on how fast the coverage rate can be expanded and how fast the contribution rate can be increased.

Pension simulations for Europe

The above simulation illustrates the impact of pension reforms on European countries with immature pension funds. But what about the mature pension funds? Will the prediction of Jan Mantel concerning the negative cash flow of the Dutch and UK pension funds prove correct (see earlier table: Pension Funds Net Cash Flow)? For The Netherlands, we found only two simulations. For the UK, we failed to find any simulation on the evolution of pension funds and we also came up empty-handed for the other individual European member states. The scarcity of research on the subject is worrying given the huge potential impact on wealth and consumption if problems were to arise.

Regarding The Netherlands, both simulations contradict the findings of Mantel. The Dutch research institution NYFER finds that pension assets rise from 110% of GDP in 2000 to around 170% of GDP by 2030, and stabilize thereafter. We find a similar evolution in the simulation done by Knaap and Bovenberg in their CESIFO working paper. In their study, pension assets rise to more than 180% by 2030. Afterwards this percentage falls back and stabilizes just above 170%.

CASHFLOW FOR SECOND PENSION PILLAR IN THE NETHERLANDS



Source: Ageing, funded pension funds and the Dutch economy, CESIFO working paper n° 1403

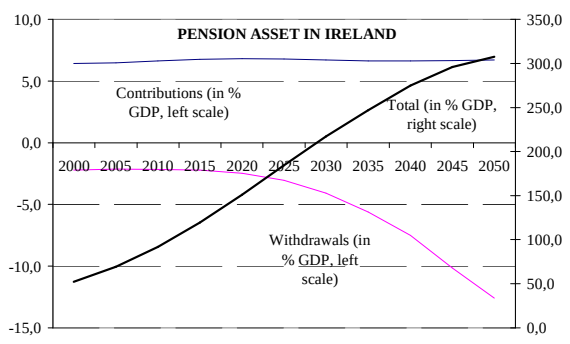
As can be seen in the graph above, the difference between contributions and payments by the Dutch pension funds will already be negative in 2006. Total pension assets however grow steadily until 2030 up to 183% of GDP. Afterwards they recede slightly to remain steady after 2050.

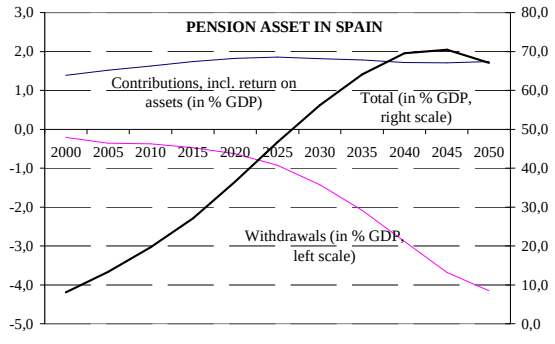
Why is there such a marked contrast with the Merrill Lynch simulation? The evolution of the coverage rate explains a lot. The actual coverage rate in The Netherlands stands at around 90%. In his basic scenario, Mantel started from a coverage rate of 50% and kept it stable for the entire period. In another simulation, he takes into account an expansion of the coverage rate and new retirement saving by more of the population. These factors could drive new funds into the pension systems after 2010 to counter the demographic effect. If, for example, the portion of the population covered by a defined benefit plan in the Netherlands is gradually increased from 50% for those who started work before 1995 to 70% for those entering the workforce in 2020, there is a substantial positive impact on cash flow in pension plans. The net outflow from funds will diminish from an amount equivalent to 2.7% of GDP to 1.5% of GDP. The coverage rate taken into account in the simulation is therefore of the utmost importance.

Equally important is the return held on the assets. But on this point, Mantel works on the assumption of a 4% return, very close to the other researchers. 'For the viability of pension funds, the balance between premium and pensions is not everything since there is an important additional source of income, namely the return on pension assets,' explains Thijs Knaap, one of the authors of the CESIFO working paper. 'In our study we assume a real return on assets of about 4%, while the economy (and the obligations of the fund) grow by only 2%.'

As we have mentioned already, with regard to the possible evolution in other European countries we found one simulation for (some of) the EU member states. The simulations that served as a basis for their working paper *Long-term budgetary implications of tax-favored retirement plans* were sent to us by Alain Deserres of the OECD Economic Department and are not publicly available.

SIMULATION PENSION INFLOW / OUTFLOW IRELAND AND SPAIN





Source: Long-term budgetary implications of tax-favored retirement plans", Working paper n° 393, OECD

In comparison with the other simulations, those of the OECD look rather optimistic. For the Netherlands for example, they estimate a rise in pension assets up to 337% by 2050. This compares to 170 to 180 % in the simulations mentioned earlier.

When we asked Mr. Deserres about this, he replied, 'a quick look at our assumptions suggests to me that basically two factors worked to offset the effect of falling working age population. First, we had to base our labor force projection on something, so we used an OECD study that came out a few months before we did ours and that had looked at participation rates with a specific focus on female and older workers. These projections embody higher participation rates for both women and (especially) older workers that partly offset the demographic trend.'

'The second factor is that in most countries for which we had information on age-group specific participation in tax-favored pension schemes and contribution rates, the data suggest that both participation in private pensions (as a ratio of people employed) and the rate of contribution (as a ratio of average income) rise with age and peak somewhere between the age of 45 and 60. Current trends show the number of people in these age groups in many countries continuing to rise for quite some time and even though in most cases it peaks before 2050, it will still be larger in 2050 than in 2015 (with a few exceptions).

The implication is that population ageing first leads to a greater accumulation of assets (say over the next 20-25 years) that will then tend to feed on itself before being slowly decumulated. Again, our assumption was that future enrolment and contribution rates per age group would remain constant in the future at current levels (except in regions or countries – Central Europe for example – where such schemes are newly introduced).'

Deserre – and we agree with him – deplores the fact that, due to a lack of detailed data, their study did not cover Germany and Italy, which have more severe population ageing

than other countries. Moreover, the OECD study restricted itself to 'pension' savings. But as Deserre says: 'However, for Germany and (to a lesser extent) France, it would have been interesting to do a similar exercise for savings in the form of insurance, to the extent that this is also long-term saving.' Since France, Italy and Germany are by far the three biggest countries in Europe, the future contribution and withdrawals in these countries could have an important impact on the demand for financial assets in all Europe.

4.2. Other reasons why a European asset meltdown is unlikely

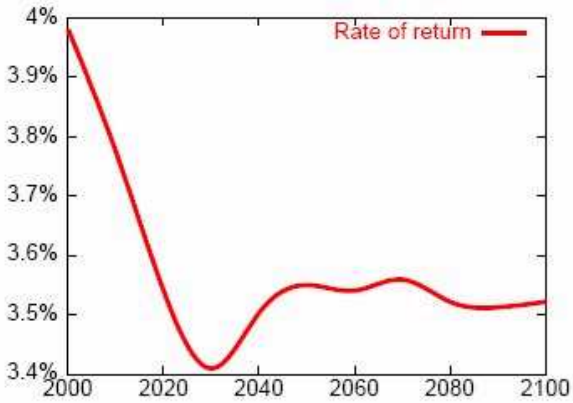
So far, none of these simulations appear to point to an asset meltdown occurring in Europe. The immaturity of the pension fund industry in many European countries is a crucial factor in explaining this. As Professor Axel Börsch-Supan of the Mannheim Research Institute for the Economics of Ageing (MEA) puts it: 'In 2030, funded old-age provision will not have achieved a balanced situation (what is termed "maturity status"). Many employees will continue to establish new funded old-age provision until approximately 2050. This will significantly cushion the effect of a withdrawal of capital by the baby-boomers."'

Return on assets

An equally important component of the explanation is the assumption made on the real return on assets. This is especially true for the mature European pension funds (UK, the Netherlands, Switzerland, Denmark) where neither the contribution rate nor the coverage rate can increase substantially. In the simulation on the Dutch pension funds, contributions minus payments will be negative from 2006 on. Total pension assets however grow steadily until 2030 up to 183% of GDP because of the real return of 4% on the assets during the period.

Looking at the average return over the last few decades, this assumption seems reasonable. The average return on the S&P500 from 1950-2000 was around 13%, when inflation averaged 4%. Average returns on government bonds reached 9.9% between 1982-1999, when average inflation was 3.3%.

ESTIMATED RATE OF RETURN ASSETS DUTCH PENSION FUND



Source: Ageing, funded pensions and the Dutch economy" (2005), CESIFO working paper N. 1403

The rate of return of just below 4% for Dutch pension funds (see graph) was partially based on the calculated world interest rate via the INGENUE model. At each point in time, this rate is determined on a single world capital market by equating world capital demand – the sum of gross investment flows – and world capital supply – the sum of regional saving. The model foresees a marked decline from over 4.2% in 2000 to about 3.6% in 2035 and a slight recovery up to just over 3.7% in 2045.

Many academic studies suggest the estimated rate of return will not fall dramatically. The abundance of saving for retirement – due in part to pension reforms in Europe – will depress the rate of return initially, but afterwards capital will be needed to compensate for the shrinking of the working population in the ageing countries. 'This means that the demand for real capital will rise at that point in time when labor becomes particularly short, which is the time when the baby-boomers retire and it is said that the asset meltdown will take place.' Professor Börsch-Süpan estimates that the return on productive capital might fall from the current figure of 7.7% to 6.7% in the fourth decade of this century. The yield on fixed-interest securities is estimated to fall from 4.1% to around 2.8%. The return on cash will decline more steeply from 3.3 to 1.8%, due to the increased demand for this type of security from the ageing population, which places pressure on the returns of such investments.

It would be hard for a simple economist to argue with these academic findings, so we do not try here. We however make some remarks. Most academic models begin with the assumption that retirees will diversify their money in international investments. The savings of the baby boomers in the fast-ageing countries can be invested in slow-ageing countries. As explained by the INGENUE Team in the CEPII report: 'Financial globalization allows for a process of equalizing rates of return on capital worldwide: retired households from

developed countries would benefit from additional income from their investment abroad, while numerous working-age cohorts in less-developed countries would benefit from a higher capital stock, hence a higher capital-labor ratio, therefore higher labor productivity and better wages'

'Moreover, investment abroad leads to a better diversification of non systematic risk, but possibly also to an increase in systemic risk, as recent financial crises have illustrated: thus, if our analysis leads to the conclusion that large amounts of capital would likely be transferred from OECD to developing countries as a result of differences in their demographic dynamics, it would raise the issue of the stability of the international financial system.'

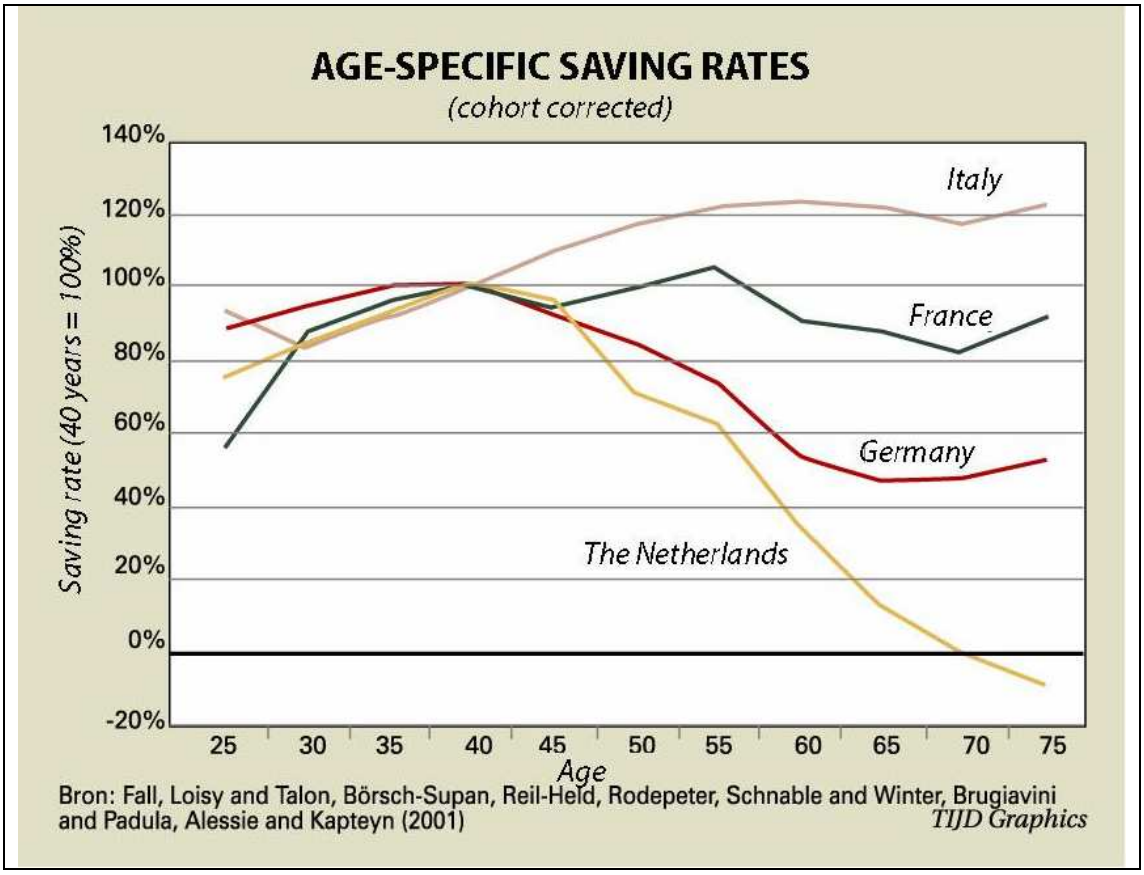
This is of course worrying, since pension reforms will make pension income more dependent on the rate of return on financial wealth. Short-term fluctuations – for example caused by a crash of the so-called emerging markets – will be difficult to avoid.
Short term fluctuations are also what is on the mind of Mr. Knaap, one of the authors of the CESIFO working paper, "*Ageing, funded pensions and the Dutch economy*. 'Personally I'm of the opinion that the long term sustainability of pension funds poses no problem,' he mails to us. 'A major problem however is possible fluctuation in the short run. In our scenario [on the expected return of the Dutch pension funds] we assume a constant rate of return of 4%. Year-to-year the return however can vary enormously. In the Netherlands, supervision of pension funds has been sharpened recently. Each year each fund now has to fulfill certain solvability criteria. A downturn on the financial markets for a certain period of time would require an increase of pension premiums, lower pensions or the swapping of shares for bonds. This can have a destabilizing effect.'

Dissaving in Europe

Achieving a high return is the best way to ensure a healthy second pillar. However, dissaving by baby boomers can still put pressure on European financial markets, especially in the countries with mature pension funds.

Most academic research however points out that shifts on the capital market caused by demographics are neither sudden nor unexpected. Baby boomers will retire over a period of 15 to 20 years. As future demographic trends are relatively well known, the capital market will anticipate this development. They conclude that the decline in returns caused by baby boomers selling off their assets will be spread over 20 years and will be barely noticeable. On this point, we can only hope that their solid belief in the efficiency of the markets is justified.

Before estimating the impact of dissaving by European retirees, it would be helpful to first know whether they do actually dissave. Contrary to what we might have expected, this is not the case.



Professor Börsch-Süpan assembled the findings of surveys in different European countries and looked at the evolution of the age-specific saving rate. In three out of the four countries, retirees do not dissave. Rather, as they grow older, they save a little less. And even that is not true for Italy, where the saving rate peaks at 75 and above. The Netherlands is the only exception to the rule.

The reason why retirees in most European countries do not dissave is plain to see. They don't have to because public PAYG pensions are more than sufficient for them to keep their consumption levels stable. The net replacement ratio of public pensions stands at 75.8%. In the US, this is 30.6%, and in Japan 41.3%.

In the Netherlands, retirees receive a state pension. Income from occupational pensions adds 34% to the total pension of the retirees. But the public pension is not sufficient to cover post-retirement consumption, so occupational pensions and other personal wealth is built up gradually. This is why people in the Netherlands, as opposed to Italy, Germany and France, do not dissave.

What direction will Europe take in the future? We believe that more and more countries will slowly adopt some kind of minimum state pension. State pensions will struggle to rise because (1) the dependency ratio – the ratio of the active population to retirees – will steadily diminish and (2) it is difficult to raise contribution rates further

without hurting the economy (tax competition in a globalized world). A constant contribution rate to the public pensions is the best we can hope for.
According to the INGENUE model, blocking pension contribution rates will lower the replacement rate in Europe by50 %. Therefore we expect occupational pensions to gradually account for a larger and larger slice of total retiree income. The implication of this evolution is that the trend in saving rates will increasingly come to resemble the one in the Netherlands.

Bequests

Bequests could play an important role in the asset meltdown story. Firstly, bequests probably partly explain why actual retirees do not dissave (another reason is the generosity of the European PAYG-system in most countries). If this trend persists, baby boomers won't dissave and the asset meltdown story loses most of its punch.

Bequests could however also boost the baby boomers' wealth just when they retire. Net financial wealth is high in Europe. Eurostat figures for the EU 15 point to a net wealth for European families in 2002 of €11,726bn or 132% of GDP. Added to this is the wealth tied up in real estate. A recent survey in Europe shows that the average family received a transfer of €92,300. The average wealth of the participants of the survey amounted to €217,060.

So, at retirement, baby boomers might receive an inheritance from their parents. However there is growing evidence that the actual generation of retirees – the parents of the baby boomers – do not show the same attitude as their own parents, often mentioning in surveys that their children earn much more than they ever did so they do not need extra financial assistance. In other words, the bequest 'ethos' is diminishing. Retirees are also often worried about their own future living expenses.

Despite this trend, the ageing of the population will increase the overall number of bequests. By 2025, their number could rise by around 22% according to calculations by economist Ivan Van de Cloot of ING Belgium. This however does not mean that those born between 1945 and 1960 – the baby boomers – will receive a bigger share. Their cohort is larger than that of their parents, so the ratio of children to parents is higher than the preceding generation. The upshot is that the (higher) bequest will have to be shared out between more individuals, meaning that the average inheritance will not increase significantly. In fact, those that receive a higher bequest are probably the offspring of the baby boomers.

Van de Cloot also notes that the scale of inheritance differs markedly from one portion of the population to another. The wealthiest 10% will receive on average around 80% of all bequests, while the remaining 90% receive very modest inheritances. Although most baby boomers will receive some inheritance, for most of them the amount will be fairly limited.

5. REAL ESTATE

The impact of demographics on housing markets is perhaps even more interesting than its impact on financial wealth. The scale of wealth invested in housing is huge and the importance of (residential) real estate has increased enormously in recent years. In the US, home ownership stands at 69%, making the country very vulnerable to the consequences of a potential asset meltdown in the real estate market.

Europe is exposed to the same risk, although the importance of housing differs from one country to another. In Belgium for example, about 72% of households own residential property, and housing represents more than 50% of the Belgians' financial wealth. The level of home ownership in Belgium is far higher than in Germany (39%), The Netherlands (53%) and France (58%).

The vulnerability of the worldwide economy to the housing market is huge. The rapid increase of housing prices laid the foundation for the stellar growth in the US during the last decennium. The so-called equity withdrawal was responsible for about 1/3rd of consumer spending in the US over the last 10 years according to Freddie Mac. Equity withdrawal has recently boosted the income of British families with mortgages as well.

Many people consider their house as an insurance against old age. This is – in theory – a perfectly logical view. Over the course of a working life, fixed assets are gradually built up and sold one by one after retirement. A perfect way to do this is via reverse mortgages, in which homeowners receive a lump sum or a monthly payment as long as they are living in their homes and the banks recover their capital when the house is sold. So far, this practice is mainly limited to the UK and the US.

There are a number of reasons why we might expect demographic effects to have a greater and more readily identifiable impact on the housing market than on the financial markets:

1. Demand for housing is more strongly age-related than demand for financial assets;
2. Housing markets are less efficient (transaction costs, the overwhelming retail participation in the market);
3. Supply adjusts less flexibly to demand, which makes it more likely that a decrease in demand and a constant supply will be corrected via prices;
4. The home country bias is much bigger in real estate. The sort of international diversification we see with financial assets, where saving and dissaving in ageing countries might be offset by investing and saving in countries with a younger population, is not possible.

These reasons make it more likely that foreseeable changes in demand will be reflected in falling house prices over time, rather than anticipated years ahead or neutralised by a decrease in supply. .

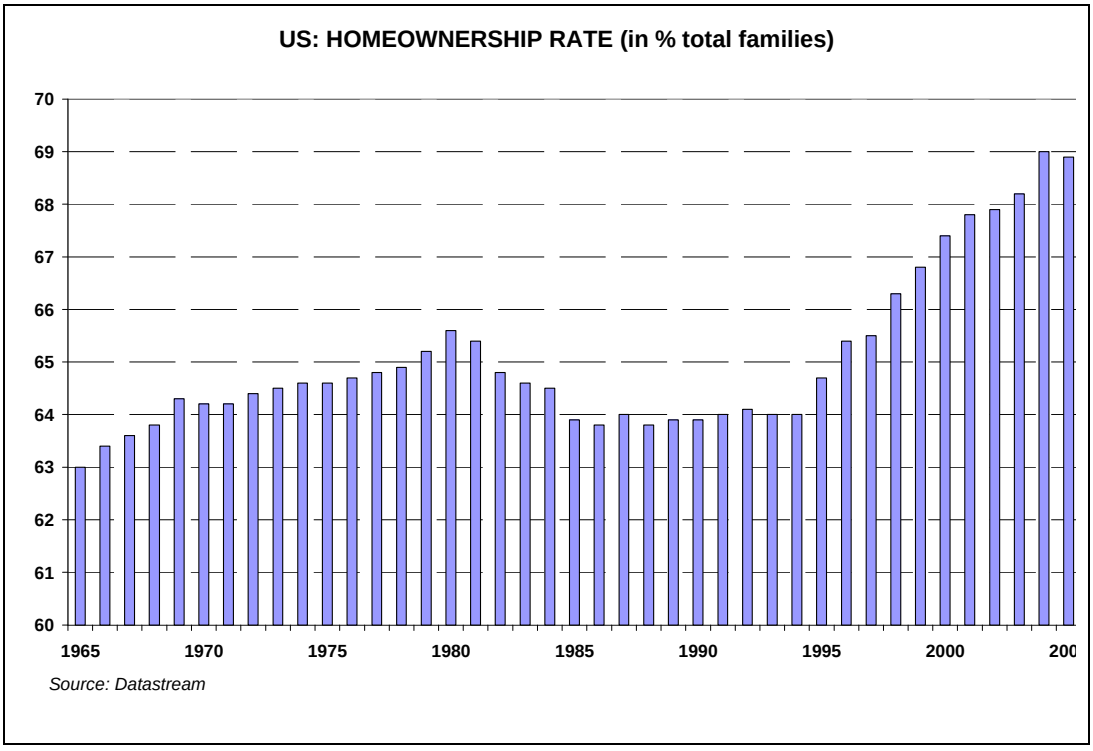
US

In a controversial study published in 1989, Mankiw and Weil were the first to warn for an approaching crash of American housing prices. The study apparently shows that housing demand is closely correlated to age. Demand rises steeply when people are in there 20s and 30s before peaking at around 40. In old age it tails off. Using this information, the authors estimate housing

demand purely on the demographic composition of the population and regressed it against housing prices. They conclude that a 1% increase in demand is associated with a 5.3% contemporaneous increase in house price. 'Since we have found a highly significant relation between housing demand and housing prices, it is natural (at least for the heroic) to extrapolate this relation forward to see what it means for future house prices […] The regression […] implies that real housing prices will fall by a total of 47% by the year 2007.'

The paper attracted much criticism. And indeed, time did prove them wrong, since the strong increase in demand has boosted housing prices over the last two decades. The main reason for their error was the over-pessimistic estimate of the increase in the number of families. In the mid nineties, the American Census Bureau increased its projections concerning the number of households, but failed to take into account the strong increase in immigration. The upshot was a dramatic increase in the percentage of homeowners, particularly during the last decade.

One of the goals of President George Bush was to raise the percentage of homeowners among the 5.5 million ethnic minority families. Between 1995 and today, the percentage of homeowners in the US has increased from 64% to 69%.



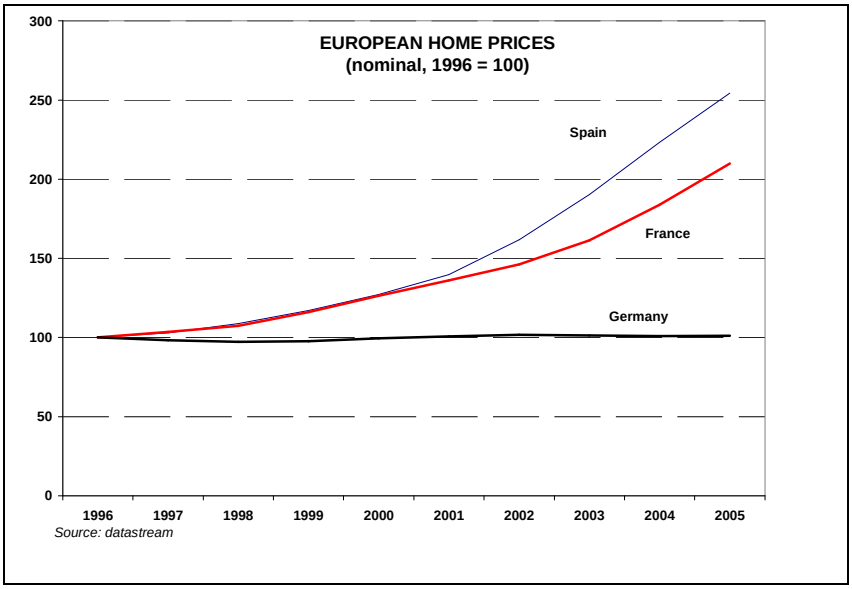
Another reason for the strong rise in prices is the increase in affordability. The impact of falling mortgage rates more than offset the downturn in demand that followed the ageing of the baby boomers.

What about the future? According to the Canadian research house BCA Research, 'up to 2010, we won't have to worry too much about demographic trends. 'What will happen afterwards, when the baby boomers retire and fade out (= die) very slowly is less clear. A whole lot of houses will come on to the market. This will pressure the real estate market, except if this is countered by an increase in immigration.'

Europe

If the situation in the US is worrying because of the demographic evolution, what can we say about Europe? Mankiw and Weils' biggest mistake was their underestimation of the increase in the number of families. The demographic profile in Europe however is far worse than that of the US. The ageing of European populations will lead to a dramatic increase in the ratio of old to young people and within two decades, the population is expected to begin falling. This demographic trend is irreversible.

So, if immigration and falling interest rates saved the day in the US, are housing prices doomed to crash in Europe? Probably not. Interest rate cuts have also propelled housing prices on the Old Continent. And according to some economists, the introduction of European Monetary Union has also fuelled the upward spiral in property prices. This has made housing prices more comparable to the US. The levelling out of housing prices across Europe has been towards the more expensive countries, rather than towards the cheapest.



'The question of whether an asset meltdown in housing will take place depends mainly on whether housing prices are too high', says Ivan Van de Cloot, economist at ING Belgium and a strong believer in the asset meltdown scenario for real estate. 'More immigration can counter the abundant supply of houses as well.'

Immigration is often mentioned as part of the solution to the ageing challenge facing Europe. There are however some doubts about whether a significant increase in immigration will occur. First, will it be sociably and politically acceptable? Second, where will this immigration come from? The potential flow of immigrants from Eastern Europe is small since their demographic problem is even more acute than that of the old EU-15 countries: the population of Eastern European countries is projected to fall by 2050 from 126 million to 104 million. Besides, any inflow would be far too small to make a significant difference. To really have an impact, immigration would need to come from African countries and Western Asia, an area spreading from Pakistan to Turkey. With the exception of Turkey, this is a region characterised by extreme poverty, failed states and / or regimes and cultures that are considered by some to be incompatible with European societies. Accepting large-scale immigration from these regions would therefore require a huge shift in cultural and political attitudes and we do not consider it as a realistic scenario. Consequently, since demand is destined to fall, real estate prices in Europe are bound to fall. Or so it would seem. But can we take another angle?

An interesting study by the Mannheim Research Institute for the Economics of Ageing (MEA) sheds a different light on the prospects for the European residential real estate market. We have taken the liberty of quoting extensively from this paper, which is one of the rare ones available on the subject concerning Europe.

The authors Axel Börsch-Supan, Alexander Ludwig and Mathias Sommer look at the German property market. Germany's demographic profile can be regarded as a good average for the total European market. The profile is worse than that of the UK and France but better than those in Italy and Spain.

They first analyze the pattern of residential property consumption over the life cycle and the trends over the last two decades. Then they project a typical residential property consumption curve over the life cycle taking into account the cohort effect of residential property consumption, which also include the expected trend in income, and project this taking the demographic changes into account. They conclude that a dramatic fall in prices due to demographic factors as predicted by Mankiw and Weil for the US is unrealistic. Their less pessimistic estimate is based on the development of residential property consumption over the life cycle, which implies lower household sizes and the clear trend over the last 20 years towards occupying more space, a pattern observed for all age groups.

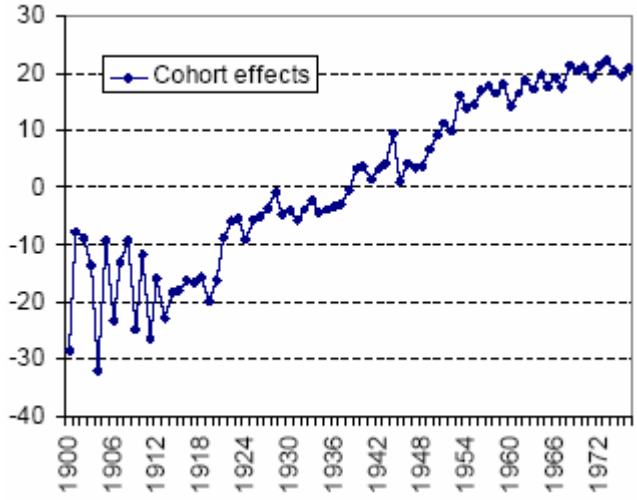
'Looking at the evolution of the average living area per household according to age, one could conclude that the consumption of living space will fall drastically in view of an ageing population. Older households require considerably less living space than younger ones and in the future there will be far fewer younger households. However, it would be wrong to draw such a conclusion.'

A declining population does not automatically mean the demand for residential property declines. 'At the same time, the average size of households in an ageing society becomes smaller. So the number of households falls much slower than the population. This effect cannot be stressed enough. Whereas according to UN forecasts, the population of Germany will fall from approximately 2005 onwards, the number of households will not start to decline until 2020, in other words with a delay of 15 years. The number of households will not drop below today's figures before 2043 and the figure will be just under 3% lower than today in 2050.'

Aside from this effect, the authors point out that the size of the living space needs to be taken into account. Smaller households characteristically have a higher floor area per person. On top of that, rising life expectancy and more prosperous young birth cohorts will fuel demand for living space.

These evolutions can be categorised as an age-related effect and a cohort effect. The age-related effect describes how demand for housing changes when an age group grows older. Calculating this effect shows that the demand for residential space from the age of approximately 45 onwards will be constant. 'This is explained by the fact that only very few people move into a small dwelling in old age.'

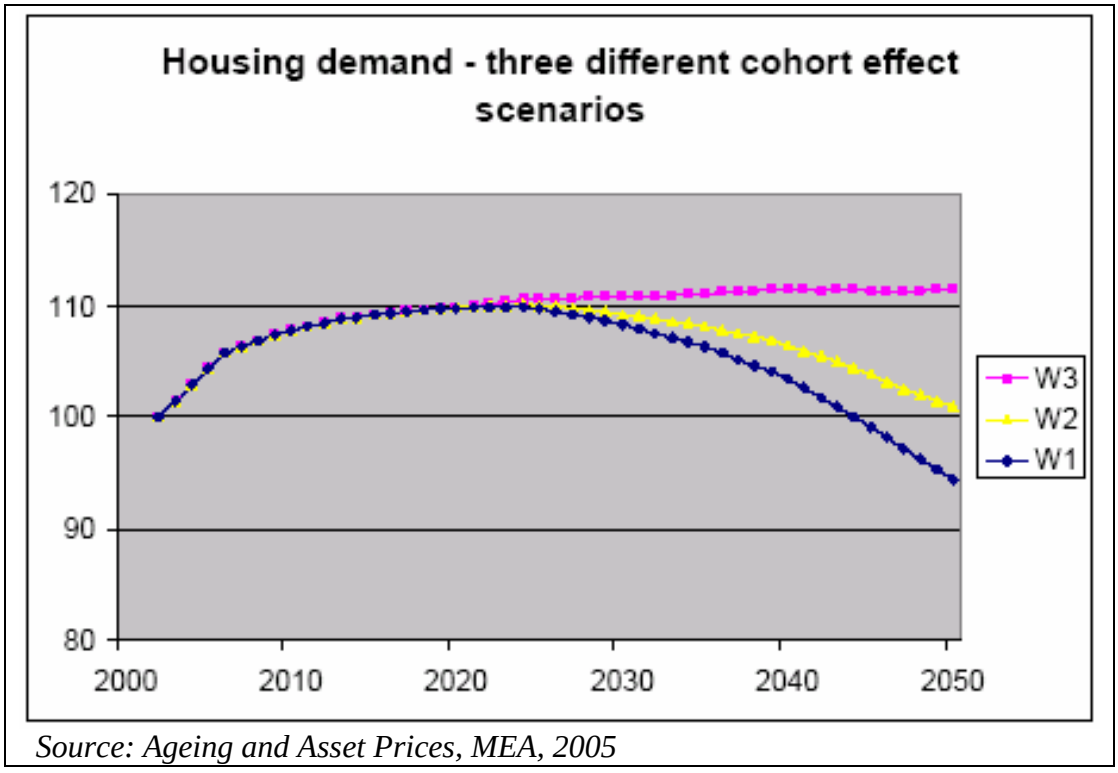
COHORT EFFECT IN DEMAND FOR HOUSING



Source: Ageing and Asset Prices, MEA, 2005

The cohort effect points to the change in demand for housing from cohort to cohort. Here, the conclusion is that the demand for housing increases with each cohort.

Taking all these effects into account, the authors used three scenarios for forecasting housing demand, ranging from a pessimistic scenario (demand for residential accommodation among future generations will only match the level of today's young) to an optimistic one. 'Until 2025, demand for residential space will increase by around 10% in comparison to 2002. From 2025 the forecasts begin to diverge sharply because at that moment, the different assumptions on the future developments of the cohort effects begin to have an impact.' In the pessimistic scenario in which the authors assumed no further increase in demand from future cohorts (the historic positive cohort effect is ignored), the demand for residential accommodation will fall by 15% from 2025 to 2050. In the optimistic scenario, which includes the positive cohort effect, they forecast a further, albeit minimal, increase in demand in the second quarter of the century.



Source: Ageing and Asset Prices, MEA, 2005

The most likely outcome according to the authors lies between the neutral and the optimistic scenario. 'Hence, whereas the demand for residential space between 2025 and 2050 will fall slightly between 2025 and 2050 for demographic reasons, a sharp fall to below today's level is rather unlikely. If one assumes that demand between 2025 and 2050 will fall by 5%, the decline each year will be around 0.2%. This development of demand for housing therefore implies a much more stable development of property values on average than would be associated with an 'asset meltdown' situation.' The authors note that this evidence also holds for France (albeit probably more dampened) and Italy (probably somewhat stronger).

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ENGLISH ABSTRACT

This paper investigates the possibility of an asset meltdown occurring in Europe. Numerous studies on the subject have been carried out for the United States, but here, we aim to give an overview of the most important papers and simulations for Europe. In this respect, this paper is a study of the literature to date and includes comments from our contacts with some of the academics writing these papers and our own opinion.

First we look into the theory of asset meltdown. Expressed simply, this theory states that the value of financial assets will decline as a result of the retirement of the baby boom generation, which will lead to an increase in the number of dissavers (65+) and a fall in the number of savers (40-65).

We go over the most important studies on the subject for the US. Afterwards we compare these findings with the situation in Europe. The demographic profile in Europe is far less favourable than that of the US. However, we conclude that the immaturity of European pension funds will more than counter an eventual dissaving by the baby boomers in the coming 3 to 4 decades.

We show that because of pension reforms, if executed as planned, a massive amount of saving will flow into the financial system. This could on the short term even have a positive impact on the prices of financial assets.

A simulation of the evolution of mature pension funds like those in The Netherlands also shows that the return held on these funds is crucial to their long-term viability Contributions minus payments for The Netherlands will turn negative from 2006. But because of the return held on the total assets, these assets will increase until 2030 and stabilize thereafter.

We also consider the impact of ageing on real estate values. Several characteristics of the real estate market make an asset meltdown in this market more likely than in the financial market. However, some factors help to offset the reduced demand for residential real estate. Firstly a study from MEA in Germany shows a 15-year delay between the reduction in the number of households – the most important factor in the demand for housing – and the population. Secondly, smaller households tend to have a higher floor area per person. And thirdly, rising life expectancy and more prosperous young birth cohorts will lift demand for living space.

NEDERLANDSTALIGE ABSTRACT

Deze studie onderzoekt de waarschijnlijkheid van een ineenstorting van de Europese financiële markten als gevolg van de vergrijzing, de zogenaamde asset meltdown. Eerst gaan we dieper in op de theorie van de asset meltdown. Deze hypothese stelt dat de waarde van de financiële activa zal afnemen als gevolg van de pensionering van de babyboomers. Want door die pensionering stijgt het aantal ontspaarders (65-plussers) en daalt het aantal spaarders (40-65).

We overlopen eerst de belangrijkste Amerikaanse studies over het onderwerp. Daarna vergelijken we de Amerikaanse situatie en gevaren met de Europese. Het demografische profiel voor Europa is veel slechter dan het Amerikaanse. Maar de noodzakelijke uitbouw van de Europese bedrijfspensioenen compenseert het mogelijke ontsparingsgedrag bij de pensionerende babyboomers tijdens de volgende 3 à 4 decennia. Indien pensioenhervormingen verder doorgezet worden, wordt er de komende jaren een massale hoeveelheid spaargeld in het financieel systeem gepompt. Op korte termijn kan dit zelfs een positieve impact hebben op de prijzen van de financiële activa.

En wat met de mature pensioenfondsen zoals in Nederland? Een simulatie van de in- en uitstroom uit de Nederlandse bedrijfspensioenen toont aan dat voor deze fondsen vooral de behaalde return cruciaal is voor hun overleving op lange termijn. De bijdragen min de uitkeringen zijn in Nederland sinds dit jaar (2006) negatief. Maar als gevolg van de behaalde return op de totale inleg, ziet het er naar uit dat die activa zullen blijven toenemen tot 2030 om vervolgens te stabiliseren.

Tot slot onderzochten we de impact van de vergrijzing op het vastgoed. Vastgoed heeft verschillende karakteristieken waardoor een asset meltdown er meer waarschijnlijk is dan voor de financiële markten (liquiditeit, transparantie, enz.). Desondanks zijn er enkele factoren die de terugval van de vraag in de vastgoedmarkt zullen compenseren. Zo toont een studie van het Duitse MEA aan dat de terugval van het aantal gezinnen – de cruciale factor in de vraag naar huizen – de terugval van de populatie volgt met een vertraging van 15 jaar. Ten tweede vragen kleinere huishoudens een grotere oppervlakte per persoon dan grote huishoudens. En ten derde zorgt de toenemende levensverwachting en welvaartsgraad bij de jongeren ervoor dat de vraag naar levensruimte toeneemt.

SOMMAIRE FRANCAIS

Cette étude analyse la possibilité d'un effondrement des marchés financiers européens en conséquence du vieillissement de la population. C'est ce qu'on appelle la fonte des actifs financiers (asset meltdown).

Nous allons d'abord nous intéresser à la théorie de la fonte des actifs financiers. Selon cette hypothèse, la valeur des actifs financiers va diminuer suite à l'arrivée à l'âge de la retraire des babyboomers. Cette augmentation du nombre de pensionnés va augmenter le nombre le nombre de désépargnants (les plus de 65 ans) et diminuer le nombre d'épargnants (les 40-65 ans).

Dans un premier temps, nous allons nous intéresser de plus prêts aux études américaines à ce sujet. Par la suite, nous comparons les situations américaines et européennes. Le profil démographique de l'Europe est bien pire que le profil américain. Cependant, le développement des pensions privées européennes compense le déficit d'épargne des babyboomers durant les trois ou quatre décennies à venir. Dans les années à venir, les pensions vont représenter une énorme quantité d'argent injectée dans le système financier. A court terme, cela pourrait même avoir un effet positif sur le prix des actifs financiers.

Quel ce passe-t-il en ce qui concerne les fonds de pension tels que ceux existant déja aux Pays-Bas ? Une simulation des flux dans les fonds de pensions hollandais montre que, pour ces fonds, seul le rendement final est important pour leur survie à long terme. Depuis 2006, la différence entre les sorties et les entrées est négative. Mais, en conséquence du rendement déterminé sur le montant total, on constate que la quantité d'actifs va augmenter pour, enfin, se stabiliser vers 2030.

Pour conclure, nous étudierons l'impact du vieillissement sur les biens immobiliers. Ces biens ont des caractéristiques différentes ce qui rend un effondrement du marché plus probable que pour les marchés financiers (liquidité, transparence, etc.). Néanmoins, quelques facteurs peuvent compenser la chute de la demande sur le marché immobilier. Une étude du MEA allemand montre que la baisse du nombre de famille – le facteur crucial de la demande de maison – suit la baisse de la population avec un retard de 15 ans. De plus, les petits ménages demandent une plus grande surface par personne que les grands. Finalement, les exigences de niveau de vie et de bien-être des jeunes augmentent la demande d'espace de vie.

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