Stopping short? Evidence on contributions to long-term savings from aggregate and micro data

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Abstract

With a move away from up-front charges following the introduction of stakeholder pensions, consumers are no longer penalised for lapsing on many long-term savings policies. Nevertheless, persistency rates may still provide an (imperfect) indicator of sales quality and provide some information on how consumers are building up savings for the longer-term. Furthermore, persistency is an increasingly important issue for financial providers and the profitability of stakeholder-friendly products. This paper uses aggregate persistency data and survey data from the British Household Panel Survey to address three key questions: What drives persistency rates among different groups in the population? To what extent does non-persistency appear to reflect poor sales and advice, rather than events in consumers' lives that were not predictable at the time of sale? Are there any messages that could be given to the industry or to consumers to help raise levels of persistency?

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Executive summary

The introduction of stakeholder pensions, and the wider reduction in up-front charges on financial products, reduces the detriment to consumers from early lapses on long-term savings policies. With more flexible products, consumers are no longer likely to lose money they have paid in premia if they stop contributing after one or two years. But, persistency is still an important issue for several reasons. One is that, all other things being equal, a sale of a good value product that meets the consumer's needs is more likely to persist. Secondly, persistency of contributions may indicate whether or not consumers are building up savings for the longer term.[1]

Thirdly, persistency is becoming increasingly important for financial providers. With capped annual management charges (and no upfront charges) providers bear more of the upfront sale costs and a lack of persistency may seriously threaten profitability.

This paper examines some of the key drivers of persistency using two sources of information. One is the aggregated information on persistency rates collected from financial providers. The other is evidence on persistency of pension contributions in the *British Household Panel Survey* (BHPS), a source of micro-data that contains detailed information on individuals' economic and socio-demographic characteristics when they start and stop making contributions.

The paper uses the evidence to address three key questions:

- What drives persistency rates among different groups in the population?

- To what extent does non-persistency appear to reflect poor sales and advice, rather than events in consumers' lives that were not predictable at the time of sale?

- Are there any messages that could be given to the industry or to consumers to help increase levels of persistency?

The main findings are:

[1] But, more information is needed on what happens when people stop contributing (whether they join an employer's scheme, or whether, and for how long, they lapse).

- Lapse rates vary significantly across different products – they are lower for endowment policies than for whole of life and other life policies and highest for pensions – and across distribution channel. Lapse rates are significantly higher for policies sold by tied advisers[2] than for those sold by Independent Financial Advisors (IFAs). In the tied channel, but not for IFAs, lapse rates are significantly lower in the second and subsequent years than in the first year, suggesting a possible sales/ advice effect.

- Lapse rates have increased on almost all products in recent years. Analysis of the aggregate data shows that this coincided with an increase in household debt. The introduction of stakeholder pensions and increasing product flexibility may be another factor.

- Evidence from the BHPS shows that lapse rates on pensions vary significantly across different groups in the population. In particular, they are higher for women than for men and higher for those on low incomes.

- The BHPS evidence indicates that one-quarter of lapses on pensions are related to changes in consumers' financial circumstances that may have been difficult to anticipate at the time when they started making contributions. In 7% of cases in the BHPS, lapses appear to have been caused by a change in marital or family circumstances.

- More worryingly, in at least one-quarter of cases of lapses in the BHPS, consumers who stopped making contributions reported that they had financial difficulties at the time they began contributing. This suggests that the policy may not have been affordable when it was sold.

For providers keen to increase persistency rates there are a number of potential pointers from this analysis.

- One is that consumers need fully to understand the costs, risks and relevant time horizons associated with long-term savings products.

[2] advisers allowed only to advise on the products of a single provider (or marketing group).

- The second is to ensure the policies are affordable, taking into account consumers' levels of debt and ability to meet other regular bills and payments. With more flexible products, consumers need to be encouraged to make use of payment holiday facilities when their circumstances change and to return to contributing when they are able.

- The third is to encourage consumers to think ahead to likely changes in their family and disposable income, and, again, to make full use of flexible products to suit their changing circumstances.

1. Introduction

On the face of it, the fact that many consumers stop paying into long-term savings policies so soon after they start is a curious phenomenon, as it appears to be in the interests of neither consumers nor the financial services industry. If products have upfront charges, consumers are likely to lose some of the money that they have paid in premia and, even if there are no direct financial penalties as with stakeholder pensions, it may seem a waste of time to enter into a long-term savings arrangement that ceases after one or two years.

Nor is a lack of persistency likely to be in the interest of the financial services industry. Providers lose the additional revenue they would otherwise have got from a growing long-term savings fund. And, in the case of stakeholder pensions with capped annual management charges, a lack of persistency may pose a serious threat to profitability. Advisers forego trail commission and, even if the commission is upfront, they may lose some goodwill from their customer if the product they recommended fails to match the consumer's needs.

Yet, in spite of the fact that persistency of long-term savings products appears to be in everyone's interests, a high proportion of consumers do not carry on contributing beyond the first few years. Latest published figures from the 2002 Financial Services Authority (FSA) Persistency Survey show that approximately one in ten people who buy an endowment or whole of life policy stop paying after one year, and one in eight people who buy a personal pension. Preliminary figures for stakeholder pensions suggest a similar level of persistency to that of personal pensions. After four years, approximately one in three people who bought a pension have stopped paying, while for endowment and whole of life policies the figure is around one in four.

One possible explanation for the lack of persistency is that even the best-laid plans can go wrong and that there are many events in consumers' lives – from a new job, to getting divorced, to winning the lottery – that mean that their financial needs, and their need for particular products, change. In some cases, consumers may stop making contributions for only a relatively short time, and take a payment holiday. With more flexible policies this is now easier for consumers to do, and the official persistency data should ideally reflect this changing reality by treating payment holidays differently to a genuine lapse.

Another possible explanation for low levels of persistency is that, depending on the structure of charges, it may benefit the industry to make any sale, even one that doesn't persist, than to make no sale at all. If there is an upfront charge on the product, providers can recoup the costs associated with making a sale and it may be profitable to make a non-persistent sale compared to no sale at all.

The introduction of stakeholder pensions with a capped annual management charge of 1% transfers more of the cost of non-persistency from early lapsers to the provider.[3] There is far less detriment for consumers associated with non-persistency. Indeed, a high level of non-persistency may even indicate a healthy level of competition with consumers switching contracts (without direct financial cost) from one provider to another (better) provider to get an improved deal. In recent years a high proportion of total new mortgage sales have been re-mortgages and this has been seen as a sign of increased competition in the mortgage market.

But, even in a world of flexible products, non-persistency may still be an important issue for a number of reasons.

One is that, on balance, a successful sale is more likely to persist than an unsuccessful sale. Of course, persistency will not be a perfect indicator of successful sales for the reasons discussed above, but, all other things being equal, a sale of a good value product that meets the consumer's needs will tend to persist for longer. And, while switching may reflect consumers' taking advantage of new and better products, in practice, in a competitive market, the *threat* of switching should be enough to drive competition and innovation, without consumers actually needing to switch.[4]

Another concern relates to the wider, ongoing debate about whether people are saving enough for their retirement (and other financial needs). In practice, only the minority of cases of non-persistency (around 10%) represent people switching from one provider to another.[5] Most are people stopping paying altogether. Thus, persistency of long-term savings products may say something about how much people are sticking with saving for the longer term. But, to get a fuller picture, more information is needed on what happens to people when they stop paying into a pension – whether

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[3] And ultimately to shareholders or, possibly, to consumers with other, non charge-capped products.

[4] For further discussion see Alfon, I. (2002) *To switch or not to switch? That's the question*, FSA Occasional Paper 18

[5] See *ccarehsto-capp*

they switch to another provider, whether they join an employer's scheme or whether they lapse on contributions altogether (and for how long).

Finally, with stakeholder products, persistency becomes an increasingly important issue for financial service providers since they bear relatively more of the cost of non-persistency. In practice, this may give providers more of an incentive to ensure that savings contracts do persist. But, clearly not all of persistency is within the providers' control, and understanding what drives persistency becomes crucial for forecasting the profitability of stakeholder products.

This suggests a number of relevant questions about the nature of persistency of long-term savings that it would be good to have answers to:

- What drives persistency rates among different groups in the population?

- To what extent does non-persistency reflect poor sales and advice, rather than unpredictable events in consumers' lives that could not have been anticipated at the time of sale?

- Are there any messages that could be given to the industry or to consumers to help improve levels of persistency?

There are insights into some of these issues from two previous studies into persistency. One of these studies was carried out by DVL Smith on behalf of the FSA in 2000.[6] Four hundred consumers who had recently lapsed on regular premium policies were interviewed on the reasons for lapsing.

The study concluded that 10 per cent of cases of lapse were genuinely unpredictable at the time of the sale. These were cases where people cited marital or domestic reasons for lapsing (eg having children, moving home or getting divorced). In a quarter of cases, the reason cited for lapsing was to do with the product (poor performance, disappointment with the sale or a feeling that the product wasn't right). DVL Smith felt that this may reflect the consumer's "reluctance to get to grips with the detail" of the policy, but that it did highlight the need for "continued scrutiny of

[6] *Persisting - why consumers stop paying into policies*, FSA consumer research report 6 (2000)

the process of ensuring that the right person receives the right product" - and, it could be added, understands fully the likely return and risks associated with that product.

In 60 per cent of cases, the reason cited for lapsing was that it was, or became, unaffordable. In around two-thirds of these cases, DVL Smith concluded that this was due to events that are difficult, but not impossible to predict at the point of sale (unemployment, change in income, need/desire to free up money for other things). In the rest of the cases, however, they felt that discontinuation might have been anticipated at the point of sale. But, they emphasised that it is extremely hard to separate cases neatly between those where the lapse could have anticipated and the provider/ adviser were in some way at fault and those where lapsing was due to unforeseeable circumstances and the provider/ adviser were completely in the clear. They also emphasised that their results, because the study was based on recollection of the reasons for lapsing, may be subject to some ex-post rationalisation by consumers.

A second study by Diacon and O'Brien (2002)[7] looked at whether there are systematic variations in persistency rates across different providers. They argued that systematic variation would be evidence that non-persistency is not solely driven by macro-economic fluctuations or changes in consumers' circumstances, but is related to the behaviour of the firm. The study found that rates of persistency for the same provider are correlated for different product types within the same distribution channel and for different distribution channels for the same product type. In other words, if one provider has a relatively low persistency rate for personal pensions in the tied channel, they will also have a relatively low persistency rate for endowments in the tied channel and for personal pensions in the IFA channel.

The study concluded that "persistency problems do not arise from random , but result instead from an inability of insurers to meet the service expectations of a whole range of customers". If true, this does mean that providers can do something to manage persistency risk in a post-stakeholder world. But the fact that the study did not explicitly control for the typical characteristics of different providers' customers may mean that it picked up the effect of differential customer bases instead of, or as well as, something about the providers.

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[7] Diacon, S. and O'Brien, C., (2002) *Persistency in UK Long-Term Insurance: Customer Satisfaction and Service Quality*, Centre for Risk and Insurance Studies Discussion Paper, 2002.III

The aim of the research presented here is to provide further evidence on the drivers of persistency using two approaches. In section 2 there is further analysis of the aggregated persistency data collected from providers by the Personal Investment Authority (PIA) and then the FSA, looking at whether there are significant differences in lapse rates across different durations, products and distribution channels. The analysis looks at whether there is systematic variation in persistency rates over time and at whether there is evidence of any significant relationship with factors in the macro-environment.

Section 3 contains analysis of persistency of contributions to personal pensions from the British Household Panel Survey (BHPS), a large dataset collecting information on a large sample of (the same) individuals since 1991. The advantage of this survey is that it collects detailed socio-economic and demographic information at the point of sale and when people stop making contributions. There is, therefore, no danger of post-hoc rationalisation as with the DVL Smith study. The disadvantage is that it is not a survey focused on persistency of pension contributions and so does not ask questions explicitly about why people have lapsed. Instead, by looking at people's family and financial circumstances it is possible to infer reasons why they might have lapsed. The aim of this piece of work is get a better understanding of what drives persistency, including consumers' socio-economic characteristics and to see whether there are any messages for how persistency might be increased.

Section 4 concludes.

2. Analysis of the aggregate persistency survey data

Since 1995 regulated firms have been required to submit annual returns to the regulator – first the PIA and then the FSA – giving information about the persistency of their life and pensions business.

The main reason for collecting the data was because persistency was thought to reflect the quality of sales/ advice and hence, indirectly, the quality of the regulatory regime. However, as discussed above, because consumers may lapse on policies because of events in their life which are unforeseeable at the time of the sale, it can only ever be an (imperfect) indicator of the quality of sales/ advice rather than a measure.

Persistency data are collected for a number of different products – endowment assurances (including mortgage endowments), whole life assurances, other life business, personal pensions, including both individual and group personal pensions and other pensions, including free-standing AVCs. For the first time in 2002, information was collected separately on the persistency of contributions to stakeholder pensions.[8] For each product, data are collected for different distribution channels (tied advisers of a life company or friendly society and independent financial advisers and, for some products, direct offer sales). In all cases, returns are limited to a period of four years from commencement of the policy.

In each case, persistency is calculated as the proportion of investors who continue to pay regular premiums to their life and pensions policies, or who do not surrender their single premium policy, who might be expected to do so. In other words, the persistency figures remove all deaths, retirements and maturities.

But, payment holidays do count as non-persistency in the aggregate figures. This leads to an over-reporting of true lapse rates, but, if the number of people taking payment holidays remained fairly constant, should not present too much of a problem for looking at systematic variation over time. However, the move towards more flexible products, which make payment holidays easier, could tend to bias the data over time and make it appear as though persistency is getting worse, when in fact people are just making more use of flexible payment facilities.

[8] This paper does not analyse stakeholder pensions, but the early results suggest persistency rates similar to those for personal pensions.

Table 1: Persistency rates from the aggregate data

	Policies sold by tied advisers				Policies sold by Independent Financial Advisers (IFAs)			
	% of policies persisting after…				% of policies persisting after…			
	1 year	2 years	3 years	4 years	1 year	2 years	3 years	4 years
Endowments								
Start year								
1993	91.7%	86.0%	80.9%	76.7%	94.4%	90.8%	87.0%	83.8%
1994	91.8%	86.6%	81.5%	76.9%	94.6%	91.2%	87.3%	83.6%
1995	92.2%	87.0%	81.6%	76.4%	94.8%	90.7%	86.3%	81.9%
1996	93.3%	87.6%	82.1%	76.8%	95.1%	90.5%	85.6%	81.2%
1997	93.1%	87.1%	81.2%	74.4%	95.8%	91.5%	87.1%	81.9%
1998	92.4%	86.0%	78.4%	69.3%	95.5%	90.6%	84.9%	78.4%
1999	91.8%	83.8%	74.7%		95.4%	89.1%	81.7%	
2000	91.9%	83.8%			94.3%	87.5%		
2001	91.1%				94.9%			
Whole of life policies								
Start year								
1993	85.0%	75.0%	66.7%	60.2%	92.4%	87.2%	81.2%	76.8%
1994	86.0%	76.6%	69.7%	62.4%	93.2%	87.3%	81.7%	76.4%
1995	87.9%	79.1%	71.1%	64.3%	93.8%	88.5%	82.6%	77.1%
1996	89.3%	80.1%	71.7%	65.1%	94.9%	89.3%	83.6%	78.1%
1997	89.4%	79.8%	72.2%	65.1%	94.7%	89.6%	84.1%	79.3%
1998	89.6%	80.5%	71.8%	64.1%	95.3%	90.2%	85.0%	79.4%
1999	89.8%	80.0%	70.4%		94.8%	89.9%	84.4%	
2000	89.0%	77.5%			94.1%	88.4%		
2001	89.7%				93.1%			
Other life policies								
Start year								
1993	85.5%	74.2%	65.1%	57.3%	91.5%	83.8%	75.1%	67.9%
1994	87.1%	76.7%	67.7%	59.8%	92.5%	86.0%	78.4%	72.8%
1995	88.3%	78.1%	68.1%	59.0%	92.2%	84.6%	78.1%	71.7%
1996	89.8%	79.9%	70.1%	61.5%	93.4%	86.9%	79.4%	72.0%
1997	89.8%	79.1%	68.6%	58.8%	94.0%	86.9%	79.0%	71.6%
1998	89.4%	78.4%	66.3%	55.2%	93.7%	86.5%	78.5%	69.2%
1999	88.8%	76.3%	62.0%		94.0%	86.4%	76.1%	
2000	86.5%	71.1%			93.5%	83.9%		
2001	85.9%				92.8%			
Personal pension								
Start year								
1993	84.1%	72.3%	63.6%	56.7%	91.5%	83.3%	76.6%	70.5%
1994	83.7%	72.6%	64.2%	57.1%	90.9%	81.2%	73.6%	66.9%
1995	85.4%	74.7%	65.4%	57.8%	90.2%	80.6%	72.1%	64.7%
1996	86.4%	74.6%	65.1%	57.2%	89.8%	79.8%	69.8%	62.3%
1997	85.6%	73.7%	64.0%	57.2%	90.2%	78.5%	69.3%	60.7%
1998	85.2%	73.6%	64.1%	56.8%	88.3%	75.8%	64.7%	53.9%
1999	84.7%	71.8%	62.3%		87.2%	72.3%	59.5%	
2000	84.7%	73.4%			83.8%	68.1%		
2001	84.5%				83.8%			

Note: The 2001 figures obtained from 2003 data have not yet been officially published by the FSA and may be subject to revision.

Table 1 summarises the aggregate data for regular premium products.[9] A number of common trends emerge by product and channel, and over time.

- Persistency rates vary systematically across products. Persistency rates for endowment policies tend to be higher than for other product types. The lowest persistency rates are for personal pensions.

- Persistency rates vary systematically across distribution channels. Persistency is higher on products sold via IFAs than through the tied channel, although there is evidence of convergence over time, particularly in the figures for pensions. The recent fall in persistency for pensions may reflect the growth in Group Personal Pension business with typically lower persistency rates. The difference between the two distribution channels could reflect something about the quality of advice, or something about the typically different set of consumers served by tied and independent advisers. Recent evidence[10] shows that, in general, consumers in the tied channels tend to be in lower socio-economic groups and, arguably, may be more likely to experience the type of employment/ income shocks that cause them to lapse. This is explored further below.

- In general, there was a trend towards improvements in persistency rates across both channels and across all products in the mid/late 1990s. This trend has since been reversed.

To look in more detail at trends over time, it is arguably easier to look at lapse rates, rather than at persistency rates, as the latter will tend to carry over a "contamination effect" from lower durations. In other words, if persistency at two years' duration is lower than average, this effect will feed through into lower than average persistency at three and four years' duration in consecutive years even though the lapse rates for years three and four might be average.

Lapse rates, ie the proportion of people who stop making contributions from one year to the next, won't suffer from the same problem of contamination. Here, lapse rates are defined as the proportion of people who lapse between one year and the next,

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[9] The analysis focuses only on regular premium products where there is some expectation that people will continue making regular payments.

[10] See R*eforming polarisation - making the market work for consumers*, FSA Consultation Paper 121 (2002)

relative the stock of people contributing at the beginning of the period.[11] Figure 1 below shows lapse rates by product and by channel. In each case, separate lines are drawn for lapse rates at different durations. The figures show lapse rates by year of lapse, rather than by start year in order to highlight the potential impact of any "lapse year" effects. These may arise from common trends in the macro environment, changes in flexibility affecting new and existing products and/or changing consumer perceptions of financial service providers or products.

- The lapse rates by products show the same pattern as the persistency rates, but of course, have the opposite sign. Whereas persistency rates are higher for endowments than for other products, lapse rates tend to be lower than for other product types. The highest lapse rates are for personal pensions.

- According to Diacon and O'Brien,[12] if lapses were driven solely by random events in the macro-environment, lapse rates would be fairly similar across different durations; significant differences in lapse rates by duration may reflect sales/ advice effects. Figure 1 shows differences in lapse rates in some cases, but no systematic patterns across all products in both channels. This is explored further below.

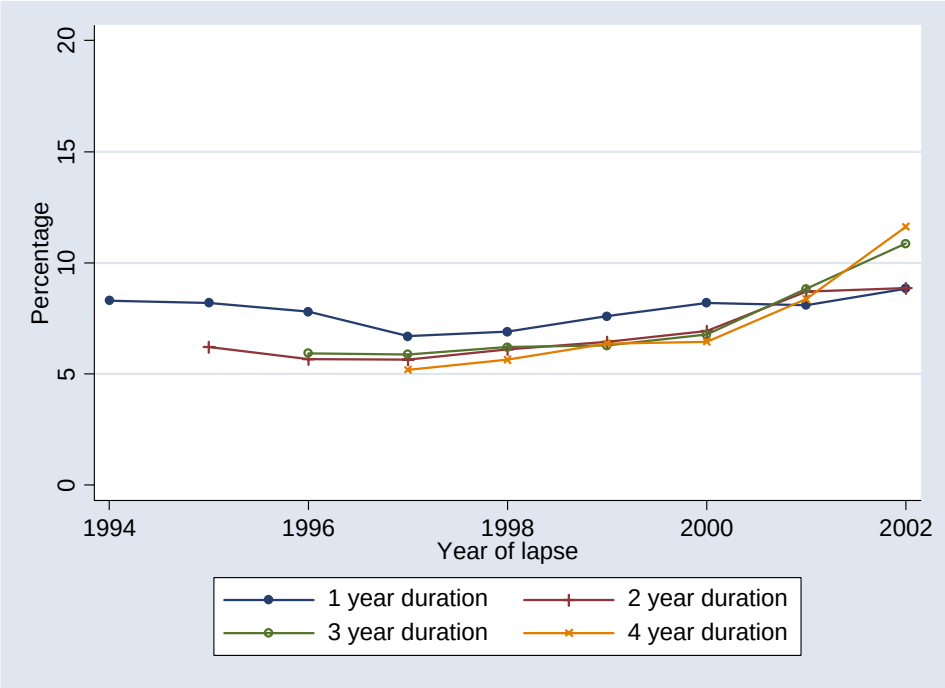
- In almost all cases (ie across all products, durations and channels) the pattern over time broadly follows a "U-shape" (although this is more pronounced in some cases than in others). In other words, there was some improvement in lapse rates at the end of the 1990s, a trend which has since been reversed. The exception is sales of personal pensions through the IFA channel where lapse rates have tended to increase systematically over time. This upward trend is likely to reflect the growth of Group Personal Pension business with higher than average lapse rates associated with job mobility. It may also reflect the introduction of stakeholder pensions and greater flexibility in personal pensions (although if this were the case it is interesting that there was not such a pronounced trend in the tied channel).

[11] ie the lapse rate in year t is defined as $(P_{t-1}-P_t)/P_{t-1}$ where P_t is the persistency rate in year t.

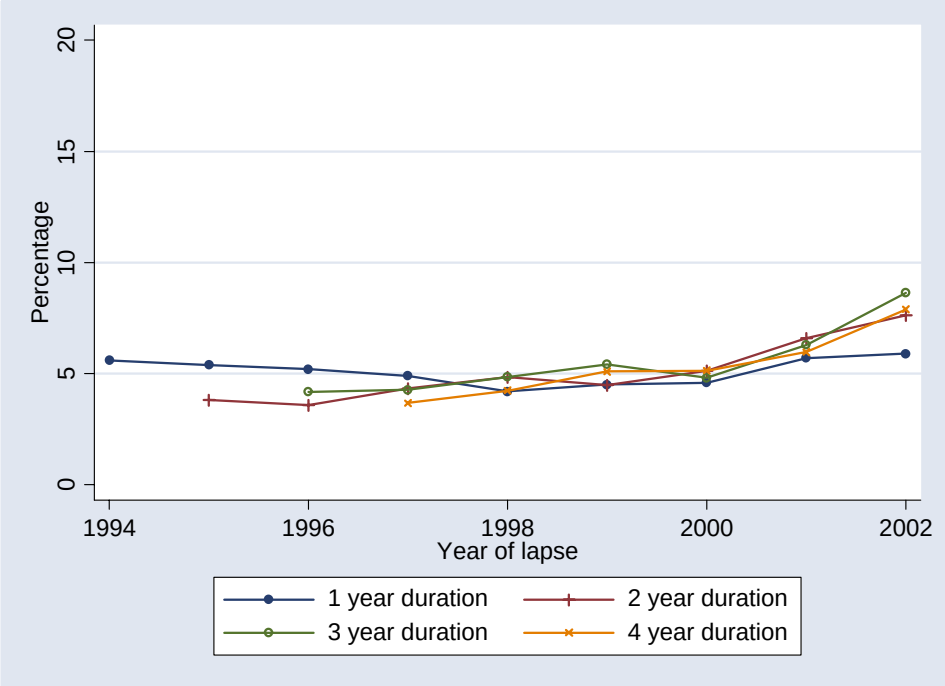
[12] Diacon, S. and O'Brien, C., (2002) *Persistency in UK Long-Term Insurance: Customer Satisfaction and Service Quality*, Centre for Risk and Insurance Studies Discussion Paper, 2002.III

Figure 1: Percentage lapse rates, by year of lapse

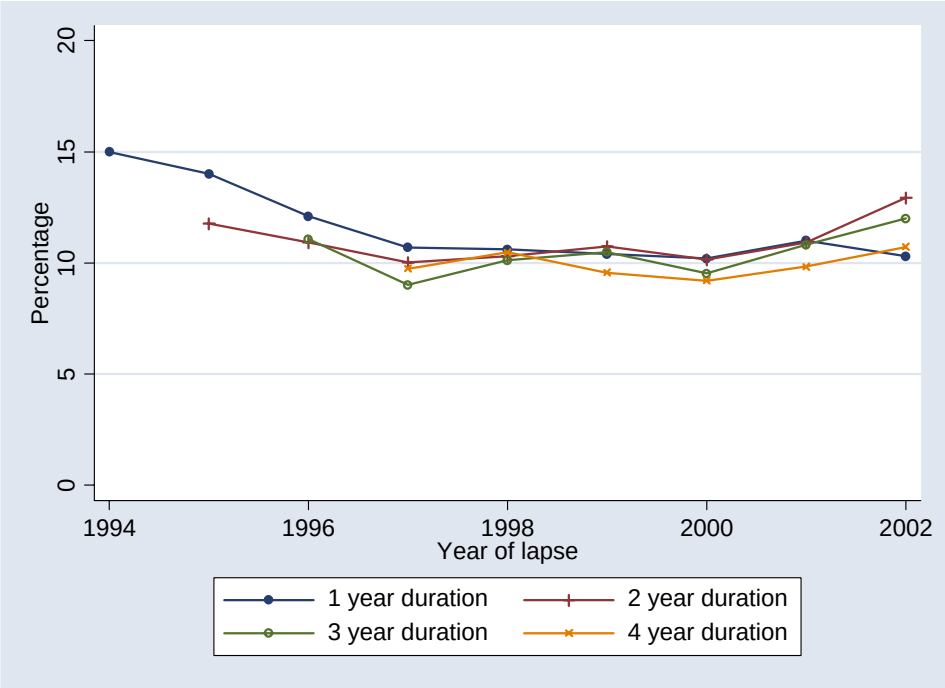
Endowment policies sold through the tied channel



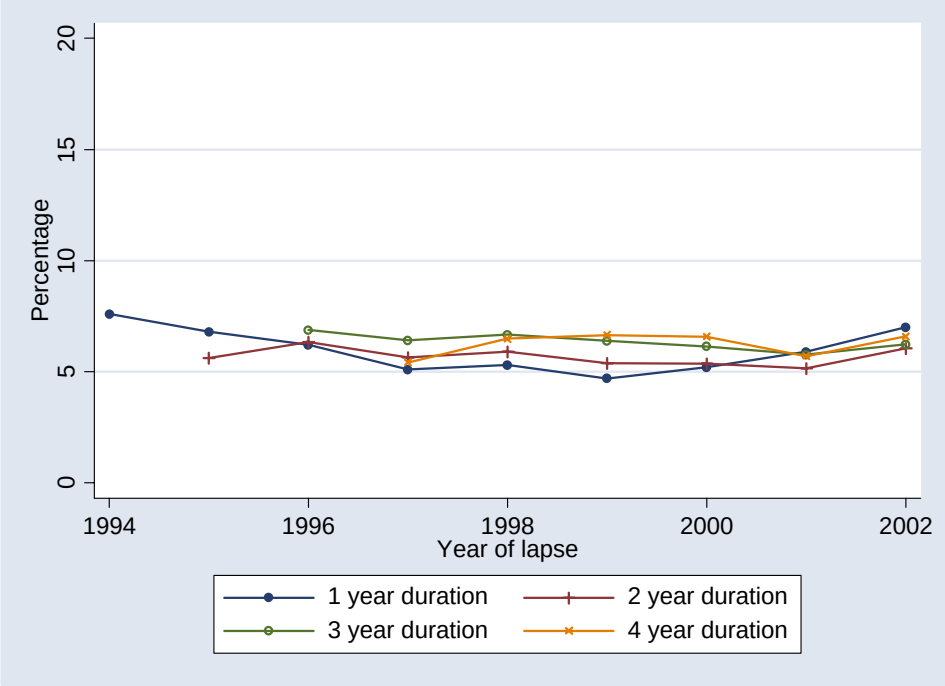
Endowment policies sold by Independent Financial Advisers



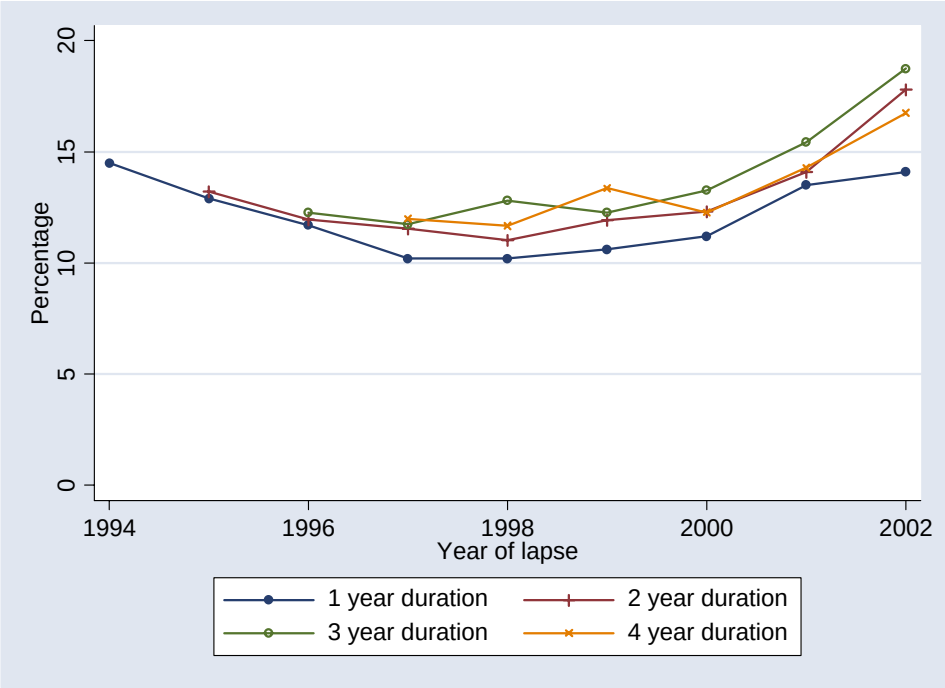
Whole of life policies sold through the tied channel



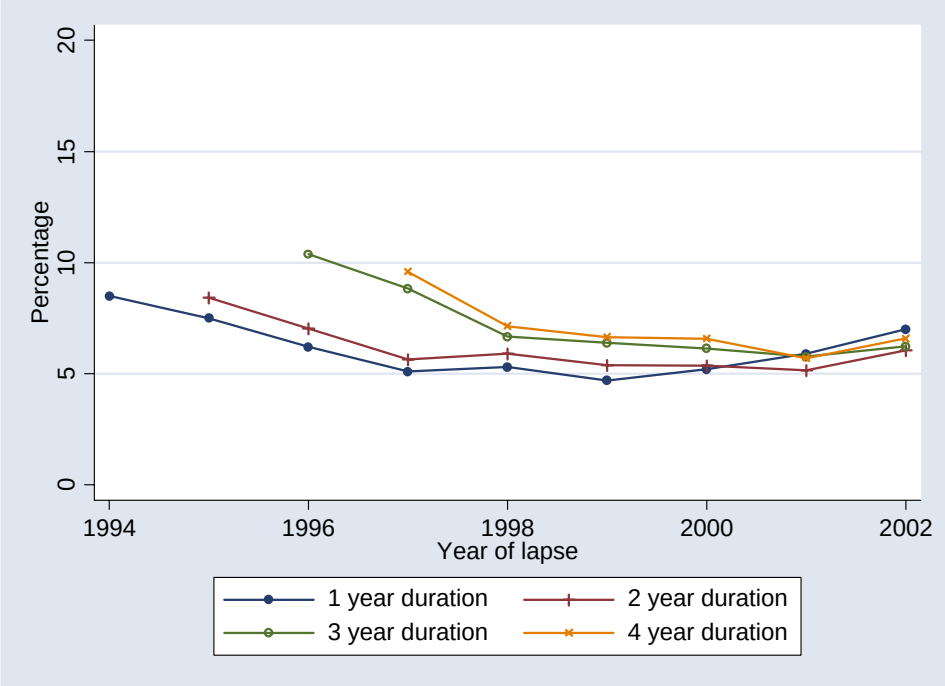
Whole of life policies sold by Independent Financial Advisers



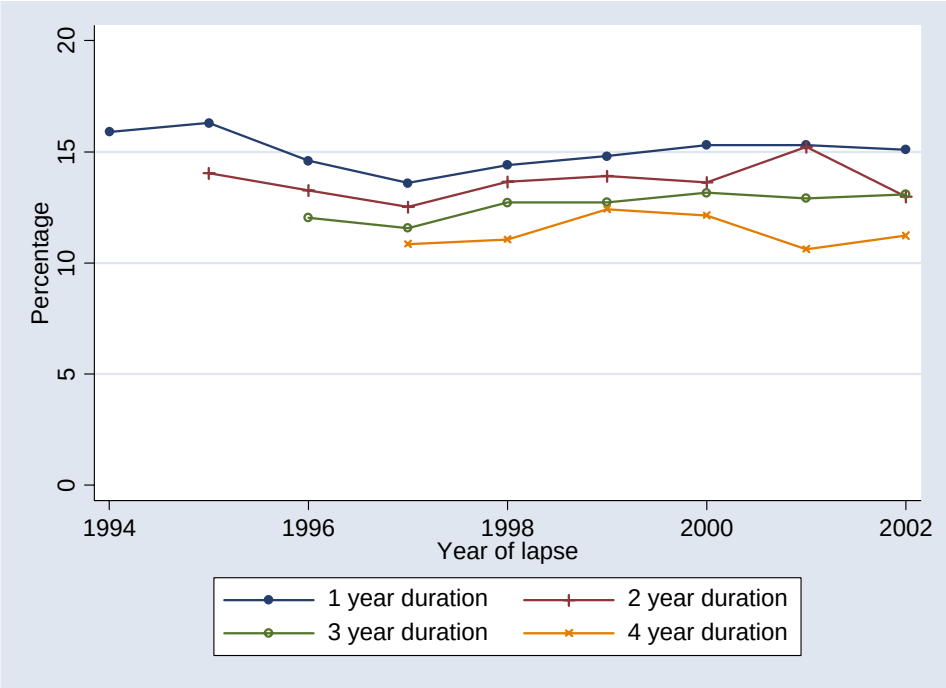
Other life policies sold through the tied channel



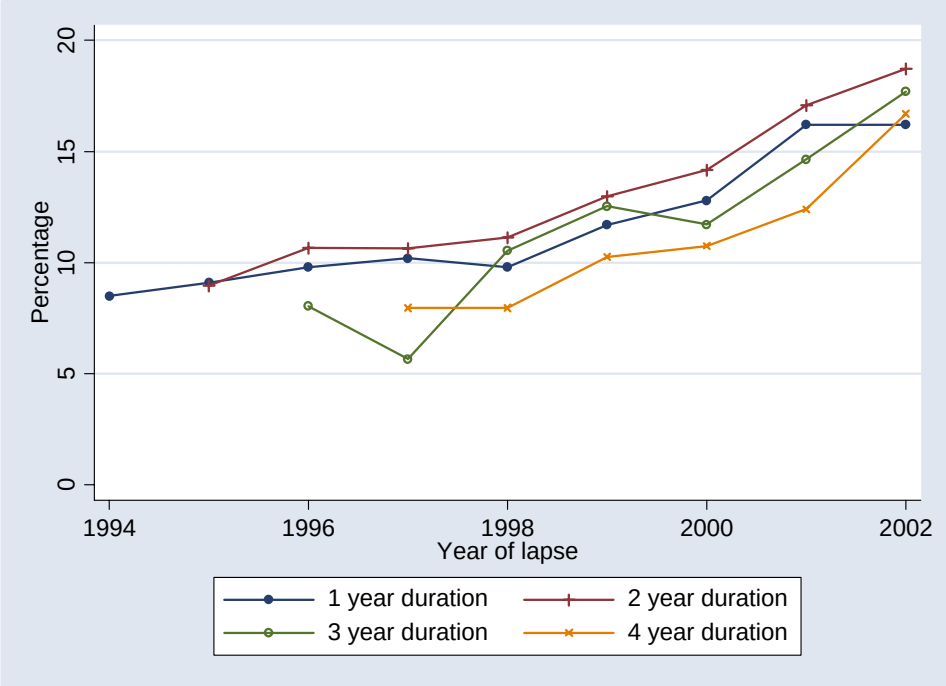
Other life policies sold by Independent Financial Advisers



Personal pensions sold through the tied channel



Personal pensions sold by Independent Financial Advisers



In order to explore further the differences in lapse rates across products, distribution channel and durations, an OLS regression is run of lapse rates (defined in percentage terms) against sets of dummy variables for product, channel and duration. To assess whether there is a higher lapse rate in the first year compared to subsequent years (reflecting a possible sales/advice effect), a dummy variable is included for durations of two or more years. A significant negative coefficient on this variable would indicate that lapse rates were higher in the first year, suggesting a possible sales/ advice effect. Initially, the regression analysis pools lapse rates across all products, channels and durations (ie all the data in Figure 1).

The regression analysis also includes a limited number of macro variables, matched according to the year of lapse, to explore whether there is any relationship between lapse rates and factors in the macro-environment. Of course, in any one year a wide range of factors may affect lapse rates, including changes in individuals' circumstances and their perceptions of the financial services industry and products; in recent years, the introduction of stakeholder products is likely to have had an impact on persistency. However, with the relatively short time series of data available, it is not possible to capture the effect of all these factors; instead the focus is on a limited number of macro-variables, reported in Table 2.[13]

Table 2: Macro-variables by year

	Real household disposable income (m); % change in brackets	% change in the FTSE	Ratio of household debt (including mortgages) to income	Unemployment rate (%)
1994	£460,701 (1.09%)	12.7	91.8	8.8
1995	£470,942 (2.22%)	-1.2	91.8	7.6
1996	£485,302 (3.05%)	18.1	92.4	7.0
1997	£502,451 (3.53%)	17.7	92.2	5.4
1998	£498,054 (-0.88%)	30.7	96.8	4.6
1999	£517,492 (3.90%)	8.2	100.2	4.2
2000	£5297,13 (2.36%)	2.1	103.4	3.6
2001	£560,817 (5.87%)	-7.2	106.0	3.2
2002	£567,179 (1.13%)	-13.4	116.6	3.1

[13] During the course of the research, a number of other possible explanatory variables were looked at including the level and growth rate of GDP, credit card balances and total mortgage lending, various interest rates, property transactions and the divorce rate.

Unemployment, the level of disposable income and debt are intended to capture consumers' ability and willingness to contribute to policies,[14] while the stock market may have an influence on consumers' perceptions of the performance of their policies.

The regression results, reported in Table 3, confirm a lot of what was shown in Figure 1. There are statistically significant differences in lapse rates across products. On average, lapse rates for whole of life policies, other life policies and personal pensions are (respectively) two, three and a half and six percentage points higher than lapse rates for endowments. Lapse rates in the IFA channel are, on average, nearly four percentage points lower than in the tied channel. There is no significant difference in lapse rates by duration.

Table 3: Regression results of lapse rates

	Parameter estimate	T-ratio
Whole of life policies	2.153	6.44
Other life policies	3.500	10.47
Personal pensions	6.334	18.94
IFA channel	-3.702	-15.66
Duration 2+ years	-0.131	-0.49
Debt ratio	0.146	3.65
Unemployment rate	0.682	2.64
(Log) Household income	6.902	0.76
Change in the FTSE	-0.005	-0.27
Number of obs	240	
Note: Direct offer sales are excluded in order to avoid over-weighting the regression toward those products where data are available for all three channels.		

Given the relatively short time period, it is likely to be fairly hard to pick up any systematic correlation of macro variables. However, the regression results do indicate a statistically significant relationship between lapse rates over time and the level of unemployment and the ratio of debt to income. Of course, too much reliance cannot be placed on the results of this simple OLS regression and they do not prove that a causal relationship exists. But the improvement in persistency rates in the mid/late 1990s coincided with falling levels of unemployment, while the subsequent fall in persistency coincided with rapidly increasing levels of debt from the late 1990s.

[14] The relationship between unemployment/ incomes and lapse rates may be ambiguous – on the one hand, higher unemployment and lower incomes may reduce people's ability to contribute (if they are unemployed), but for those still in work, there may be an increased desire to save because of increasing uncertainty.

The results in Table 3 are based on data pooled across products and channel. Separate regressions are also run for the two distribution channels and for each of the four products to see what different patterns emerge. Full results are reported in Tables 4a and 4b.

Table 4a shows differences across the two distribution channels. In the independent channel, there is less difference in lapse rates between endowments and whole of life policies and between endowments and other life policies than in the tied sector. In the tied channel, on average, lapse rates are significantly higher in the first year than in subsequent years, suggesting a possible sales/ advice effect. The 2+ year dummy is not significant in the independent channel. The debt and unemployment variables are significant in both, although the relationship appears to be marginally stronger in the tied channel.

Table 4b reports separate regression results for each of the four products. These show that there is a statistically significant difference in lapse rates between the two distribution channels for all four products; the difference is greatest for other life policies and smallest for pensions. The products show different patterns of variation by duration. In the case of whole of life policies lapse rates in the second and subsequent years are significantly *higher* than in the first year. For pensions and endowments they are significantly lower, assuming a one-tailed test.

For pensions, there is no significant relationship between lapse rates and the level of debt and unemployment. This may reflect other changes over time that have affected lapse rates on pensions, for example, the trend towards increasing flexibility may dominate any relationship with changes in the macro-environment. The relationship between lapse rates on personal pensions and factors in individuals' circumstances is explored in more detail in the next section using detailed micro-data from the British Household Panel Survey.

Table 4a: Regression results of percentage lapse rates, by distribution channel.

	Tied channel		IFA channel	
	Coefficient	T-ratio	Coefficient	T-ratio
Whole of life policies	3.497	10.47	0.809	1.84
Other life policies	5.663	16.95	1.337	3.03
Personal pensions	6.045	18.10	6.621	15.02
Duration 2+ years	-0.542	-2.03	0.279	0.79
Debt ratio	0.157	3.91	0.136	2.57
Unemployment rate	0.701	2.71	0.664	1.95
(Log) Household income	1.683	0.19	12.121	1.02
Change in the FTSE	-0.019	-1.03	0.009	0.37
Number of obs	120		120	

Table 4b: Regression results of percentage lapse rates, by product

	Endowments		Whole of life		Other life		Personal pensions	
	Coeff	T-ratio	Coeff	T-ratio	Coeff	T-ratio	Coeff	T-ratio
IFA channel	-2.092	-11.00	-4.780	-23.77	-6.418	-17.44	-1.294	-2.11
Duration 2+ years	-0.364	-1.69	-0.142	-0.62	1.274	3.06	-1.517	-2.80
Debt ratio	0.157	4.88	0.134	3.94	0.157	2.51	0.137	1.49
Unemployment rate	0.700	3.36	0.732	3.32	1.291	3.21	0.007	0.01
(Log) Household income	13.323	1.83	-1.797	0.23	15.821	1.13	0.261	0.01
Change in the FTSE	0.003	0.20	0.006	0.37	0.007	0.25	-0.036	-0.85
Number of obs	60		60		60		60	

3. Analysis of the BHPS data on persistency of pension contributions

The British Household Panel Survey has been collecting information on a panel of approximately 10,000 individuals since 1991. Each year, the same individuals[15] are interviewed and asked for a wide range of demographic and socio-economic information, including their family circumstances, their employment and their income. Also, since 1992, the BHPS has collected information on whether or not people are making contributions to a personal pension.[16] Because the BHPS follows the same individuals over time, this information can be used to look at the extent to which individuals persist in making pension contributions from one year to the next.[17] Alongside this, the demographic and socio-economic variables can be used to look in some detail at individuals' circumstances at the time they start contributing and at their circumstances, and changes in their circumstances, when they stop contributing. From this can be inferred which particular factors are linked to non-persistency.

The analysis of pension contributions in the BHPS presented here uses information from waves two to ten (ie 1992 – 2000) and looks at a sub-sample of individuals who are present in the survey for at least four consecutive waves, have no missing data, have contributed to a personal pension at least once and are aged 18-52 in 1992. The sub-sample comprises around 2,000 individuals.

The main advantages of using the BHPS survey are the sample size, the wealth of information collected on individuals' income, employment and household circumstances, and the fact that there is no danger of post-hoc rationalisation (unlike the work carried out by DVL Smith). The main disadvantage of the survey is that,

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[15] In addition, new adult members to the households of the original sample (eg children reaching the age of 18, new partners) are added to the sample each year. If an individual leaves the household (eg they divorce the household head), they remain in the sample and their new household members (if any) are added to the sample.

[16] In particular, the survey asks the following: (after asking about membership of company pension schemes) *I'd like to ask you now about private personal pensions, that is a pension that you yourself have taken out on your own behalf. In the past year, that is since September 1st 1991 have you paid any contributions or premiums for a private personal pension, or had such contributions paid on your behalf by the Department of Social Security?* This information on pensions has been used fairly widely in analysis of personal pensions (see for example Disney, Emerson and Tanner (1999) *Partnership in pension: an assessment* IFS) and has been shown to match other sources fairly closely in terms of overall coverage of personal pensions and levels among different groups in the population.

[17] Very simply, someone is assumed to persist if they answer positively to making contributions in consecutive years and they are assumed to lapse if they make contributions in one year, but not in the next.

because the survey is so broad and not focused specifically on persistency of pension contributions, it does not drill down precisely into the reasons why people lapse. The data from the BHPS can be used to look at variation in persistency rates across different types of consumers, which has not been looked at before, and can be used to draw inferences about the possible reasons why people lapse on pension contributions, but may not be able to account for all cases of lapse.

Persistency rates across different consumers

Table 5a summarises persistency rates for pension contributions, by duration, using the BHPS data (averaged across all years).[18] In principle, these rates are broadly comparable with the aggregate persistency rates for personal pensions in Table 1 (albeit not exactly from the same period), averaged across all start years.

The average lapse rate in the first year is very high compared to the figures reported in Table 1. At least part of the explanation is likely to lie in the fact that it is not possible to separate regular and single premium policies in the BHPS, so at least part of the observed first year "lapse" is likely to be on single premium policies. Lapse rates in years two, three and four (15, 7 and 5 percentage points respectively[19]) are much more comparable to the persistency survey. The table also shows persistency after five years, showing that persistency continues to fall at a decreasing rate beyond the period of the persistency survey.

Table 5a also reports persistency rates separately for men and women. There is a statistically significant difference between the two.[20] After one year, the persistency rate for women is five percentage points lower than it is for men and this difference is largely maintained at higher durations. The fact that women are less likely to have a personal pension than men (even controlling for differences in income and employment) is widely recognised; this evidence suggests that part of the explanation might lie in higher lapse rates. The difference between men and women is likely to (at least partly) reflect the relatively high proportion of women who stop contributing to a pension when they leave work to look after children, discussed further below.

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[18] These are calculated on a sub-sample of people who are observed to start contributing to a pension.

[19] In this case the lapse rate is calculated as P_{t-1}-P_t because of concern that the persistency rate P_1 will include the effect of single premium policies.

[20] Performing the log-rank test for the equality of survivor functions gives a $\chi 2$ statistic of 8.53.

There are no significant differences in persistency rates according to the age someone is when they start contributing to a pension (Table 5b).[21] But earnings do matter (Table 5c).[22] After one year, the persistency rate of someone earning more than £30,000 a year when they start contributing is ten percentage points higher than the persistency rate of someone earning less than £10,000 a year. This difference is largely maintained at longer durations.

Table 5a: Persistency rates, by gender

% of people still contributing…	All	Men	Women
After one year	57.7	59.9	54.8
After two years	43.3	46.1	39.7
After three years	35.8	38.5	32.1
After four years	31.6	34.4	28.1
After five years	28.5	30.8	25.6

Table 5b: Persistency rates, by age when contributions began

% of people still contributing…	20s	30s	40s	50s
After one year	58.9	55.8	59.3	56.5
After two years	43.0	42.5	43.2	45.8
After three years	35.0	35.1	36.4	37.6
After four years	30.6	32.1	31.5	32.7
After five years	28.4	28.0	28.8	28.7

Table 5c: Persistency rates, by earnings when contributions began

% of people still contributing…	<£10,000	£10,000-20,000	£20,000-30,000	>£30,000
After one year	52.6	56.9	56.1	62.5
After two years	38.1	40.7	42.0	50.0
After three years	31.9	32.0	33.9	43.2
After four years	28.6	27.0	29.4	39.2
After five years	26.3	23.5	25.2	36.1

Those on low incomes may be more likely to get into financial difficulties because of changes in their financial circumstances, making them unable to continue paying into a pension. But, as discussed further below, many of those on low incomes who lapse actually report financial difficulties at the time that they start making contributions to a pension. This suggests that at least part of reason why persistency rates are lower

[21] Performing the log-rank test for the equality of survivor functions gives a $\chi 2$ statistic of 0.41.

[22] Performing the log-rank test for the equality of survivor functions gives a $\chi 2$ statistic of 22.25.

among those on low incomes may be because the policies were unaffordable at the time they were sold.

There is also a significant difference in the persistency rate between people who report additional saving (other than in their pension) and those who don't.[23] Among "savers" the persistency rate is approximately 5 percentage points higher after one year, and this higher rate persists at longer durations. There remains a significant difference once differences in income are controlled for.

Possible reasons for lapsing

Using the BHPS data, some of the possible reasons for lapsing can be inferred from looking at what the individual's family and economic circumstances were at the time they stopped making contributions, and whether their circumstances had changed from the previous year. Also, using the BHPS, it is possible to see what the individual's circumstances were at the time they started making contributions.

A very simple criterion is used to decide whether something in the individual's circumstances, say moving house, is a significant factor in determining lapse. The proportion of lapsers who moved house in the year that they stopped making contributions is compared with the proportion of non-lapsers who move house. If the two are statistically significantly different,[24] moving house is taken to be a significant factor in lapsing. If the two proportions are not significantly different, it is not seen as a significant factor. Table 6 summarises the results, giving separate results for men and women.

Table 6 considers a number of possible factors that might be considered relevant for lapsing. The majority of variables relate to changes in the individual's circumstances in the year of lapse (ie between the year in which contributions were made and the year in which no contributions were made). These include changes in marital status (including changing from being single to being married and from being married to being divorced, separated or widowed), moving house,[25] changes in income and earnings (defined to be greater than 20%) and changes in employment.

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[23] The BHPS asks *Do you save any amount of your income for example by putting something away now and then in a bank, building society, or Post Office account other than to meet regular bills?*

[24] ie a t-test rejects the null that the two proportions are the same at the 5% significance level.

[25] Measured by a change in where the respondent lives between one wave and the next.

Also included are whether the individual self-reported that they experienced financial difficulties[26] in the year of lapse and whether the individual self-reported that they experienced financial difficulties in the year in which they started making contributions. These factors are not mutually exclusive and more than one may be present in a case of lapse (eg someone can become divorced and experience a fall in income).

As in the DVL Smith study, domestic and marital circumstances appear to be a significant factor for whether or not someone lapses. A general change in marital status is not significant, but perhaps this is not surprising as this includes people who get married. Looking at the sub-group who became widowed/ divorced or separated in the same year as they stopped contributing, the proportion is significantly higher among lapsers than among non-lapsers. This effect is broadly similar for men and women. However, while significant, it can account for only a small proportion (1.5%) of lapses.

Leaving work to look after children is a significant factor for women, but not for men. Overall, 4.4% of people who lapse leave work to look after children in the same year. Among women, the figure is 9.1%. DVL Smith argued that changes in domestic and marital circumstances could not be anticipated at the time of sale. Leaving work to have children may, however, be something that many women do think ahead to and consumers could be encouraged to think about likely changes in their family and employment circumstances, particularly if stopping contribution early imposes a penalty. With the introduction of more flexible products, better suited to women's more flexible career patterns, however, it is arguable that this becomes less important.

Moving house does not appear to be a significant factor (it was found to be important in the DVL Smith analysis), although this is likely to matter more for endowment policies than for pensions.

Table 6: Life events and lapsing

	Percentage of lapsers			Is it a significant factor?
	All	Men	Women	

[26] Someone is defined as having financial difficulties if report that they are just getting by/ finding things quite difficult or finding things very difficult.

Domestic and marital circumstances				
Any change in marital status in year of lapse (includes getting married and becoming widowed/ divorced/ separated)	7.8%	6.9%	8.9%	No, for men and women
Became widowed/ divorced/ separated in year of lapse	1.5%	1.3%	1.7%	Yes, for men and women
Left work to look after children in year of lapse	4.4%	0.4%	9.1%	Yes, for women
Moved house in year of lapse	11.2%	11.3%	11.1%	No, for men and women
Financial difficulties				
Self-reported financial difficulties in year of lapse	30.1%	31.4%	28.7%	Yes, for men and women
Experienced greater than 20% fall in household income in year of lapse	16.3%	16.5%	16.1%	Yes, for men
Experienced greater than 20% fall in earnings in year of lapse	6.1%	6.3%	6.0%	Yes, for men
Became unemployed in year of lapse	2.2%	2.9%	1.2%	Yes, for men
At least one of these financial difficulties in year of lapse	43.1%	44.7%	41.2%	Yes, for men and women
Experienced financial difficulties at the time contributions started	32.0%	32.4%	31.5%	Yes, for men and women
Other change in employment				
Changed jobs in year of lapse	15.6%	16.0%	15.2%	No, for men and women
Moved from full-time to part-time work in year of lapse	2.5%	1.5%	3.7%	No, for men and women

As in the DVL Smith study, financial circumstances are a significant factor in whether or not someone lapses. There a number of variables reflecting an individual's financial circumstances, including self-reported financial difficulties, a change in their household income or individual earnings in the year that they stop paying and whether or not they become unemployed. Taken together, at least one of these factors is present in more than 40% of cases of lapse. Interestingly, however, changes in household income and individual earnings and unemployment are significant factors for men, but not for women. There was no evidence of a significant relationship between unemployment and lapse rates on pensions at the aggregate level, but this may have been hard to pick up with a short time series of data.

DVL Smith concluded that, in most cases, the fact that a policy became unaffordable would have been difficult to predict at the time of sale. Becoming unemployed or experiencing a significant change in household or individual income may be unpredictable at the point of sale in many cases (although some people may anticipate these changes). But, the evidence on individuals' financial circumstances at the time they started contributing shows that in many cases the policy may have been unaffordable at the time that they started making contributions. Of those who lapse, nearly one in three report financial difficulties at the time they start contributing to a pension. Of the 40% for whom one of the financial factors is present at the time of lapse, nearly half reported financial difficulties when they began contributing.

Finally, Table 6 reports other changes in employment, which might be thought to affect persistency, but which are found to be not significant in practice. One is whether the person changed job in the year they stopped contributing, the other is whether they move from full-time to part-time work. In both cases the proportion of lapsers who changed jobs/hours is not significantly different from the proportion of non-lapsers. It has been argued that people who change jobs may stop contributing if they move to a new employer with an occupational pension scheme. However, this may be being offset by a counter-effect, documented by Disney and Emmerson (2003),[27] that people who change jobs are more likely to choose a personal pension (even opting out of their employer's scheme when an occupational pension is available) because of the portability and flexibility of personal pensions.

In order to compare these figures from the BHPS directly with the results from the DVL Smith analysis, it is necessary to take out single premium policies, which are included as "lapses" in the BHPS, but were excluded from the DVL Smith study. As a rough estimate, single premium policies may account for approximately 17 per cent of all the observed lapses in the BHPS.[28] In this case, the figures in Table 6 would need to be inflated by a factor of 1.2 in order to compare them to the DVL Smith analysis; doing this makes the figures in the two studies very similar.

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[27] Disney, R. and Emerson, C. (2002) *Choice of pension scheme and job mobility in Britain*, IFS working paper W02-09

[28] The lapse rates for years two, three and four are broadly comparable across the BHPS and the aggregate persistency data, suggesting that the rates for regular premium policies are similar across the two sources of data. To bring the BHPS one-year lapse rate in line with the aggregate data, it would need to be halved. Assuming that approximately half of the difference is due to single premium policies, and based on the fact that two-thirds of the lapses in the BHPS are first year lapses, single premium policies would account for around 17% of all lapses.

- DVL Smith found that approximately 10% of lapses were due to domestic and family circumstances; in the BHPS the adjusted figure is approximately 7.2% (including cases of becoming widowed/ divorced/ separated and leaving work to have children). In the BHPS this excludes the impact of house moves which are likely to be relevant for endowment mortgages in the DVL Smith study, but were found to be not significant for pensions in the BHPS.

- DVL Smith found that approximately 60% of lapses were due to the policy being/ or becoming unaffordable; in the BHPS the adjusted figure is around 50%. However, the BHPS evidence suggests that a larger number of these lapses could be anticipated at the time of sale than in the DVL Smith analysis, indicated by the fact that people reported financial difficulties at the time the policy was taken out. In a further 10% of lapses in the BHPS the individual reported financial difficulties at the time the policy was taken out, but not at the time of lapse.

That leaves around 30% of cases of lapse in the BHPS that are unexplained by the variables looked at. These may be lapses caused by other factors in the individual's economic or domestic circumstances that have not been considered. Alternatively, DVL Smith found that in 25% of cases of lapse, the consumer cited reasons to do with the product itself. The evidence from the aggregate analysis in the previous section sheds some further light on this, suggesting some evidence of a possible link between stock market performance and persistency, at least among consumers in the tied sector. Finally, the evidence from the BHPS on lower lapse rates among "savers" suggests that a certain, residual level of lapsing may be down to the individual's personality type.

4. Conclusions

The introduction posed three questions:

- What drives persistency rates among different groups in the population?

- To what extent does non-persistency reflect poor sales and advice, rather than unpredictable events in consumers' lives that could not have been anticipated at the time of sale?

- Are there any messages that could be given to providers, advisers or consumers to help improve levels of persistency?

Of course, persistency is the outcome of both consumers' changing circumstances and the sales/ advice process, as well as the changing market for financial products, and it is not always possible to draw a neat dividing line between the different causes of lapses, but a number of preliminary conclusions do emerge from the analysis of the BHPS and aggregate persistency data.

Approximately one-quarter of cases of lapses in personal pensions appear to be related to changes in consumers' financial circumstances.[29] In 7% of cases, lapses appear to have been caused by a change in marital or family circumstances. Some of these changes in family and/or economic circumstances may be anticipated, in other cases they may be hard to predict.

Of possibly greater concern is that, in at least a further one-quarter of cases of lapse, the individual reported financial difficulties at the time they started making contributions, suggesting that the policy may have been unaffordable at the time it was sold.

The aggregate persistency data reveal interesting differences in persistency rates across different products and between the two main distribution channels. A key issue is whether there is systematic variation by duration. Diacon and O'Brien's argument would suggest that higher lapse rates in year one indicate a sales/ advice effect. On average (ie across all products and channels) lapse rates in the second and

[29] These figures are adjusted to exclude single premium policies as discussed in the previous section.

subsequent years are not significantly different from those in the first year, but they are lower in the tied channel and for pensions.

With the introduction of more flexible stakeholder products, the penalty for consumers of lapsing on a long-term savings product is far less. Arguably, from the consumer's perspective, it matters less whether they continue making contributions to a policy or not . This is good news for consumers with typically lower persistency rates and those who experience unexpected changes in their circumstances which make it hard to continue paying policies (at least in the short-term). Going forward, the focus of interest from the consumers' perspective may be more on how long and how much they are contributing to build up a retirement fund.

But, the cost associated with lapse doesn't get eliminated; it gets transferred to the financial services industry. This puts pressure on providers to raise persistency rates in order to increase the products' profitability. One option is simply to exclude those groups with lower persistency rates. Another option is to attempt to improve persistency rates among those groups.

For providers keen to increase persistency rates there are a number of potential pointers from this analysis, and some messages to give to consumers.

- One is that consumers need fully to understand the commitment, risks and relevant time horizons associated with long-term savings products to prevent any irrational reaction to short-term fluctuations in performance.[30] Of course, as the DVL Smith study pointed out, there may be an underlying consumer "reluctance to get to grips with the detail" of policies, but there may still be more that the industry can do.

- The second is to ensure that policies are affordable, taking into account consumers' level of debt and ability to meet other regular bills and payments. And to help consumers cope with changing financial circumstances by making use of payment holidays and encouraging them to return to contributing when they are able.

[30] A reaction to short-term stock market falls may be perfectly rational and reflect a desire to move to safer assets.

- The third is to encourage consumers to think ahead to likely changes in their family and disposable income, and, again, to make full use of flexible products to suit their changing circumstances.