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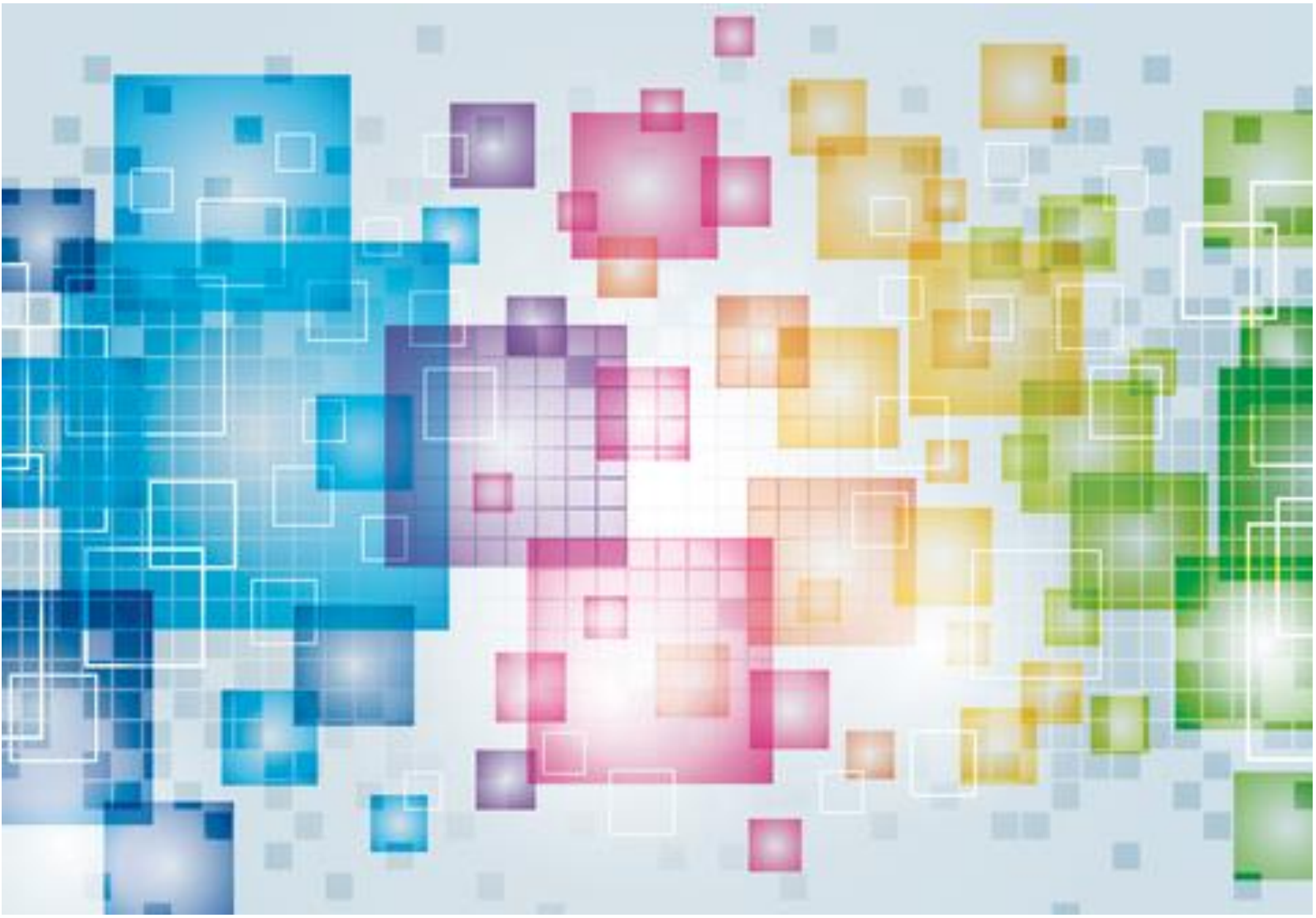

Resetting life insurance

Analysis of New Zealand market structure

NZIER report to Sovereign Assurance

7 December 2015

About NZIER

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NZIER was established in 1958.

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Key points

The New Zealand life insurance market is stagnating. Premium revenue from new business has been lower than the reduction in premium income from lapsed and cancelled policies since about 2012.

Premium revenue for the industry has only continued to rise because of the contractual increases in premiums for existing policyholders for factors such as inflation and increased risk due to policyholders getting older. The number of policies (an indicator of the number of people insured) seems to have been static since about the beginning of 2013.

The average premium revenue for both new and lapsed policies seems to be lower than the average premium for existing policies. This suggests that customers with new or terminating policies are more price sensitive than the shrinking core group of existing policyholders.

Policy acquisition and maintenance costs are high – in excess of 40 percent of annual total premium income. For the industry as a whole, these costs are split about evenly between commissions paid to 'independent' sales teams and life insurance company costs. However the mix of costs varies widely across companies. Also the cost per dollar of premium revenue does not appear to fall as company size increases.

For many companies less than half of policy acquisition and maintenance costs are commission payments, suggesting that strategies to lower distribution costs need to consider the efficiency of both the 'independent' sales teams and company distribution channels.

The differences between company levels of commission payments as a share of premium revenue and also the different mixes of costs to acquire/costs to maintain policies suggest that companies are already pursing different sales strategies.

We have not been able to identify any independent estimates of the price sensitivity of policyholders to increases in premiums. This makes it difficult to answer the question of how much the scope of the market might expand if the premium prices were lowered due to a reduction in the cost of distribution, or how long these gains would persist in the face of annual adjustments in the premium cost.

Insurers' policy maintenance costs seem to be similar regardless of whether they use advisers. However insurers' policy acquisition costs could be up to 100 percentage points higher for insurers that use advisers compared to insurers that do not use advisers.

A reduction in commission payments of 25 or 50 percent would be expected to enable a maximum reduction in insurance premiums of 6 or 12 percent respectively.

The prime market for life insurance – households with dependent children that own the house they live in – seems to be contracting. The numbers of households that either own the house in which they live or have dependent children have barely changed between 2006 and 2013.

The only group of households that has grown rapidly over the past two censuses are households that rent the house in which they live.

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1. Data sources

1.1. New Zealand market data

Publicly available data sources on the consumption of life insurance in the New Zealand market are very limited. The main sources of data that have been used in the preparation of this report are:

- quarterly industry statistics released by the Financial Services Council (FSC):[1]
  - 'Quarterly return for traditional and risk business - product summary'
  - 'Quarterly return of benefits paid'
- life insurance company annual financial reports for the financial years 2012 to 2014.[2]

We have not been able to identify any publicly available statistics on the characteristics of the consumers of life insurance in the New Zealand market or estimates of the price or income elasticities of demand for life insurance. In the section on market analysis we suggest how the quarterly returns could be used to estimate a proxy for a crude average price elasticity of demand.[3]

1.2. Overseas data

The value of comparison between New Zealand and overseas markets is limited by the difficulty of identifying structural differences between the overseas and New Zealand markets and then determining the extent to which structural differences explain differences in key metrics such as the annual rate of growth in life insurance premiums[4] These difficulties are explained in more detail in the report on 'Exploring Underinsurance Within New Zealand' and were the rationale for the authors of the report estimating underinsurance on the basis of New Zealand market data only.

1 The returns can be downloaded from the website http://fsc.org.nz/Research++Resources/FSC+Industry+Statistics.html.

2 These reports can be downloaded from the New Zealand Companies Office website https://www.business.govt.nz/companies/, after searching for the company. For the purpose of this analysis sections of the financial records (the Income Statement for the consolidated entity and relating notes on the composition of revenue and expenditure) were copied into an Excel spreadsheet. As the majority of the electronic records were scanned paper copies of the accounts, the required information was transcribed manually. We have cross-checked the information for transcription errors but we cannot guarantee that all numbers were transcribed accurately or that some we have captured subsequent revisions of the numbers reported in the accounts.

3 The FSC statistics include a policy cover count which provides a high-side estimate of the number of individuals with insurance. The Household Economic Survey by Statistics New Zealand includes questions on the weekly spending on life insurance and the proportion of sampled households answering the survey question, which suggests only about 30 percent of surveyed households have life insurance. Neither of these data sources provides clear and direct information on how many people have life insurance, let alone the type of risk covered.

4 New Zealand data for OECD insurance statistics is supplied by Statistics New Zealand using data from the Annual Enterprise Survey. Most of the OECD tables for life insurance do not include data for New Zealand. Data for countries that are usually comparators to New Zealand, such as Australia and the United Kingdom, seem to be supplied by prudential regulators.

2. Life insurance market size

2.1. Introduction

The analysis in this section is based on the quarterly statistical returns prepared by the FSC and in particular the 'Quarterly return for traditional and risk business - product summary'. This return provides the following information on the drivers of premium revenue for the life insurance products:

- premiums in force at the beginning and end of each quarter
- contractual premium changes – that are specifically allowed for in the contract such as CPI or age adjustments
- new business – increases in premiums not included in contractual premium changes
- claims and expiries – premiums for policies that reach maturity or are subject to a claim
- lapses, surrenders and cancellations – premiums that cease because the policy is discontinued without a claim being made or the policy reaching maturity.

We have compared the premiums under 'new business' with 'claims and expiries' and 'lapses, surrenders and cancellations' to assess whether the market is expanding or contracting beyond existing policy-holders.

The FSC quarterly returns also include the number of the new policy covers written during the quarter and the total number of policy covers in place at the end of the period. We have attempted to use this data to estimate the change in the number of policyholders and to make an initial estimate of the price elasticity demand for insurance products. However the reliability of these estimates is questionable due to the following:

- ambiguity about the relationship between the number of covers reported in the quarterly return and the number of policyholders
- an unexplained surge in the number of covers outstanding for the quarter ended 31 March 2013.

2.2. FSC annual data

An annual summary of the data from the FSC quarterly returns is presented in the following tables. The tables include the following products:

- 'risk' products – which are contracts with individual policyholders and are the dominant form of insurance products, accounting for almost 90[5] percent of the total premium revenue and include:
  - term life, guaranteed acceptance and accidental death
  - trauma, disability, replacement income and lump sum disablement

[5] The share of premiums earned from risk products has increased from approximately 75 percent in 2006 to 88 percent in 2015.

- credit insurance

- ‘group’ products – which are schemes with multiple memberships sold under one policy which account for about 6 percent of premium revenue in 2015 and include ‘life – death and disablement’, ‘trauma’ and ‘replacement income’
- ‘traditional products’ – which include ‘whole of life’.

(Annuities are excluded from the table because they are a very small proportion (less than 1 percent of total premiums) and appear to the reported differently from the other insurance products).

The first table contains information on the drivers of the change in premiums in force. The second table contains information on the number of ‘covers’ outstanding and an estimate of the average premium for existing, new and terminated covers.

Table 1 Life insurance premium drivers

Premiums at the start and end of the year with annual totals for the main drivers all in $m

Year ended	Premiums in force at start of year ($m)	Increase ($m)		Decrease ($m)		Premiums in force at end of year ($m)	Annual change (%)
		Contractual premium changes	New business	Claims and expiries	Lapses surrenders and cancelled		
30-Jun-07	1,263	78	166	14	141	1,351	
30-Jun-08	1,351	90	184	15	141	1,479	9.5%
30-Jun-09	1,479	100	220	16	189	1,577	6.7%
30-Jun-10	1,577	106	225	16	196	1,699	7.7%
30-Jun-11	1,699	118	207	14	192	1,810	6.6%
30-Jun-12	1,810	130	195	16	212	1,886	4.2%
30-Jun-13	1,886	139	227	18	245	2,015	6.8%
30-Jun-14	2,015	148	236	18	258	2,115	4.9%
30-Jun-15	2,115	164	247	18	271	2,234	5.6%

Note: The table excludes ‘revisions’ and ‘transfers’ to emphasise the main drivers of the change in ‘premiums in force’. Therefore the ‘Premiums in force at start of year’ plus the ‘Increases’ and ‘Decreases’ listed in the table do not reconcile with the ‘Premiums in force at end of year’

The table also excludes single premium contracts.

Source: NZIER analysis of FSC quarterly returns

Table 2 Life insurance covers –number and average premium

Number (000s) of covers in place, new covers (FSC data) and NZIER estimate of terminated covers

Estimated average premium per new, terminated and existing cover

Year ended	Annual premium contracts (000s)			Estimated average premium per cover ($)		
	New during period	Estimated claims, expiries lapses, etc.	In force at end of period	New during period	Estimated claims, expiries lapses, etc.	In force at end of period
30-Jun-07	473	*450*	3,079	351	*346*	439
30-Jun-08	496	*504*	3,087	370	*310*	479
30-Jun-09	522	*784*	3,349	421	*262*	471
30-Jun-10	530	*608*	3,427	423	*348*	496
30-Jun-11	468	*516*	3,475	443	*398*	521
30-Jun-12	479	*574*	3,569	406	*397*	528
30-Jun-13	552	*1,043*	4,060	411	*252*	496
30-Jun-14	594	*237*	3,703	397	*1,166*	571
30-Jun-15	540	*543*	3,706	457	*534*	723
Re-estimation						
30-Jun-13		*698*	*3,715*		*376*	*542*
30-Jun-14		*582*			*474*	

Note: The number of covers for the quarter ended March 2013 increased by about 345,000 ('Risk –Term' (165,000 covers), 'Risk – Replacement Income' (110,000 covers) and 'Risk –Trauma' (70,000 covers) without a similar surge in the level of premium income. The number of covers fell by approximately the same amount in the quarter ended June 2014 This suggests a temporary change in the way covers were counted rather than a shift in market conditions.

In the rows at the bottom of the table under the row heading 'Re-estimation ' is an estimate of the data for terminating and existing policies excluding the jump in the number of covers in the March 2013 quarter.

Source: NZIER analysis of FSC quarterly returns

2.3. A shrinking market

We use the data in the previous two tables to analyse the structure of the market. The key observations from the previous tables are:

- estimated average premium for new business is considerably lower (10 to 30 percent) than the average premium for the existing policies, suggesting that new policies are being sold to lower risk (younger) clients
- estimated average premiums for new and for terminating policies are similar, which may suggest that these policies have similar risk characteristics.
- reported new business and lapsed/cancelled policies provide an estimate of the upper limit of potential churn of policies – about 13 percent of premium

revenue over the last year compared with an average of 12 percent over the period from 2007 to 2014.

The difference in the average premium for existing policies and new or terminating policies suggests two-different levels of price sensitivity in the market.

Further analysis of the data on annual premium income shown in the table below suggests the following:

- despite the growth in the insurance premium revenue, market penetration appears to be falling - net new business has not been sufficient to offset the loss of premium income from terminating policies since at least 2012
- the main driver of premium growth is increases in the premiums charged to existing policyholders. These increases now average almost 8 percent per year – well above the rate of inflation, suggesting that the cost of cover for these policyholders is rising because of a change in their assessed risk.

Table 3 Life insurance premium drivers

Premiums at the start and end of the year with annual totals for the main drivers all in $m

Year ended	Premiums in force at start of year ($m)	Contractual premium changes ($m)	Net new business ($m) (new less terminating premiums)	Premiums in force at end of year ($m)	Rate of change	
					Contractual premium changes	Estimated average new business premium
30-Jun-07	1,263	78	10	1,351	6.2%	
30-Jun-08	1,351	90	27	1,479	6.7%	5%
30-Jun-09	1,479	100	14	1,577	6.7%	14%
30-Jun-10	1,577	106	13	1,699	6.7%	1%
30-Jun-11	1,699	118	2	1,810	7.0%	5%
30-Jun-12	1,810	130	-33	1,886	7.2%	-8%
30-Jun-13	1,886	139	-35	2,015	7.3%	1%
30-Jun-14	2,015	148	-40	2,115	7.4%	-4%
30-Jun-15	2,115	164	-43	2,254	7.8%	15%

Note: The table excludes 'revisions' and 'transfers' to emphasise the main drivers of the change in premiums in force. Therefore the 'Premiums In force at start of year' plus the 'Contractual premium changes' and 'Net new business' listed in the table do not reconcile with the 'Premiums In force at end of year'.

Source: NZIER analysis of FSC quarterly returns

The available data on premium income and numbers of covers is not sufficient to unambiguously assess the price sensitivity[6] of insurance revenue. It is not clear from

[6] Price sensitivity is measured by the change in quantity demanded for a given change in price – called 'price elasticity of demand' by economists. A product has elastic demand if a 1 percent price decrease encourages an increase in quantity

the data what proportion of the terminations of existing policies is a direct response to the annual price increase on existing policies reflecting factors such as inflation and age. If the price increase was the only factor affecting termination the data would suggest that the price elasticity of insurance is slightly higher than one – so that a fall in prices would be expected to encourage higher premium revenue. Assessing this price sensitivity accurately would be a key element in making a compelling argument for the reduction of distribution costs as a means to increase the penetration of insurance in the market.

We have only been able to find a small number of economic studies of the general price sensitivity of demand for insurance. Some of these studies suggest demand for insurance is price elastic – a 1 percent reduction in prices generates a larger increase in insurance sales but others suggest that demand is price inelastic.

2.4. Conclusions

Analysis of the FSC data suggests that the main driver of growth in life insurance premium revenue is the annual escalation of premiums for existing contracts. The scope of the market appears to be contracting with net new business not sufficient to offset terminating premium revenue since at least 2012. Also the average premium revenue for new and lapsed policies seems to be lower than the average premium for existing policies. This may indicate that customers with new or terminating policies may be more price sensitive than existing policyholders.

We have not been able to identify any independent estimates of the price sensitivity of policyholders to increases in premiums. This makes it difficult to answer the questions of how much the scope of the market might expand if the premium rates per cover were lowered due to reduction in the cost of distribution and how long these gains would persist in the face of annual adjustments in the premium cost.

In the next section we use the financial statements of the insurance suppliers to analyse the cost structure of both the distribution and management of insurance policies. We use the FSC data on new and terminating insurance premiums as an estimate of the business base to which the insurance company distribution costs apply.

demanded of more than 1 percent, so that revenue rises if the price falls. A product has' inelastic demand' if a 1 percent price decrease encourages an increase in the quantity sold of less than 1 percent so that sales revenue falls if the price falls.

3. Life insurance suppliers

3.1. Introduction

The analysis in this section is based on the consolidated annual financial statements of 14 life insurance companies operating in New Zealand[7] for balance dates between 2012 and 2014. The statements of income for each insurer and related notes follow a similar format that includes the following information:

- gross insurance premium income and reinsurance costs
- investment income and changes in policyholder liabilities
- gross claims and reinsurance costs
- operating expenses including policy acquisition and maintenance costs

This data is used to describe the size and structure of the sector as well as to identify the different types of operating models used by different suppliers in the market.

3.2. Overall market structure

The average major income and expenditure items for life insurance providers over the period 2012 to 2014 are summarised in the following tables. (A more detailed version of the table is provided in 'Appendix A Insurance company financial data').

Insurance company premium revenue averaged $1,948 m over the past three years with average investment and other income of $966 m. The average premium income is consistent with the data obtained from the FSC returns.

Use of reinsurance is concentrated among the smaller companies and averages about 15 percent of premium revenue for the whole market.

Claims paid (including surrenders) averaged $1,334 m over the past three years. This is approximately $300 m higher than the benefits paid reported in the FSC quarterly returns (which do not include surrenders). However it appears that the FSC returns and the claims data from insurance company financial statements are consistent. Four companies accounting for about half of the industry premium revenue reported surrenders and claims separately. The value for surrenders for these companies was about 27 percent of the combined total value for surrenders and claims.

We have emphasised the consistency between data from the FSC returns and insurance company financial statements to support our linking of the cost of policy acquisition and maintenance from the financial statements to the FSC data on the premium revenue related to new and terminating business.

[7] We have grouped the financial results by calendar year. Providers accounting for approximately half of all premium income (Sovereign Assurance, Asteron Life, Fidelity Life and Kiwi insurance) have a 30 June balance date, while most of the remaining providers have either a 31 December balance date (AMP life, NMLA, Cigna Life and Hannover Re) or 30 September balance date (One Path Life NZ and Westpac Life NZ).

Table 4 Life insurance company revenue and use of reinsurance

Averages for the balance dates in the calendar years 2012 to 2014 ($m)

Company	Premium	Investment income	Oher income	Reinsurance expense	Reinsurance recoveries
Sovereign Assurance	616	164	7	49	43
AMP Life	215	275	177	14	13
NMLA (AMP)	193	183	8	5	4
One Path Life (NZ)	185	6	6	29	23
Asteron Life	164	44	0	26	24
Fidelity Life	128	40	7	56	48
Westpac Life NZ	127	9	15	10	7
AIA	102	10	0	46	26
BNZ Life	77	4	0	15	13
CIGNA Life	56	6	0	3	2
Partners Life	38	0	0	23	8
Hannover Re Life	31	3	0	1	0
Kiwi Insurance	9	0	0	4	2
Pinnacle Life Limited	6	0	0	3	2
Total	**1,948**	**744**	**222**	**285**	**213**

Source: NZIER analysis of life insurance company financial statements

According to their financial statements, life insurance companies spend on average about $864 m per year on 'acquiring' or 'maintaining' policies of which $441 m is paid in commissions to either 'related' or 'third' parties. Policy acquisition costs average $465 m (approximately 217 percent of the new premium revenue reported in the FSC returns), comprising:

- commission payments of $244 m (approximately 114 percent of the new premium revenue)
- 'other' payments of $220 m (approximately 103 percent of the new premium revenue).

Policy maintenance costs average $399 m comprising commission payments of $197 m and other payments of $203 m. The financial statements do not provide information on the length of time for which policy maintenance costs are paid after the first year. However if the maintenance costs were applied to average premium revenue (which is likely to overstate the eligible premium revenue) the implied costs would be maintenance commission at 11 percent of premium revenue plus other maintenance costs at 12 percent of premium revenue.

The following table lists the average claims, operating costs and policy acquisition and maintenance costs for individual life insurance companies. (A more detailed version of the table is provided in 'Appendix A Insurance company financial data'.)

Table 5 Life insurance company claims and operating costs

Averages for the balance dates in the calendar years 2012 to 2014 ($m)

Insurer	Claims and surrenders	Operating expenses	Policy acquisition and maintenance costs		
			Total	Commission	Other
Sovereign Assurance	467	278	273	140	133
AMP Life	217	229	63	19	44
NMLA (AMP)	186	65	57	20	37
One Path Life (NZ)	78	101	98	41	57
Asteron Life	127	87	85	48	37
Fidelity Life	63	72	68	35	32
Westpac Life NZ	49	49	48	40	8
AIA	51	43	17	17	0
BNZ Life	34	25	25	12	13
CIGNA Life	21	41	41	10	31
Partners Life	13	78	78	53	25
Hannover Re Life	23	6	6	4	2
Kiwi Insurance	3	3	3	1	2
Pinnacle Life Limited	3	3	1	0	0
Total	**1,334**	**1,083**	**864**	**441**	**423**

Source: NZIER analysis of life insurance company financial statements

The financial data analysed above indicates that life insurance distribution costs average about 44 percent of premium revenue. Just over half of these costs (about 23 percent of premium revenue) are commission payments. The level of these costs combined with the lack of growth in the market gives life insurance companies as a group a strong incentive to identify and develop lower cost distribution channels. However the strength of this incentive will vary from company to company depending on differences in the cost of each company's distribution model.

3.3. Different cost models

In this section we compare the operating and distribution costs of the life insurance companies to gauge the difference in potential benefits to companies of lowering distribution costs.

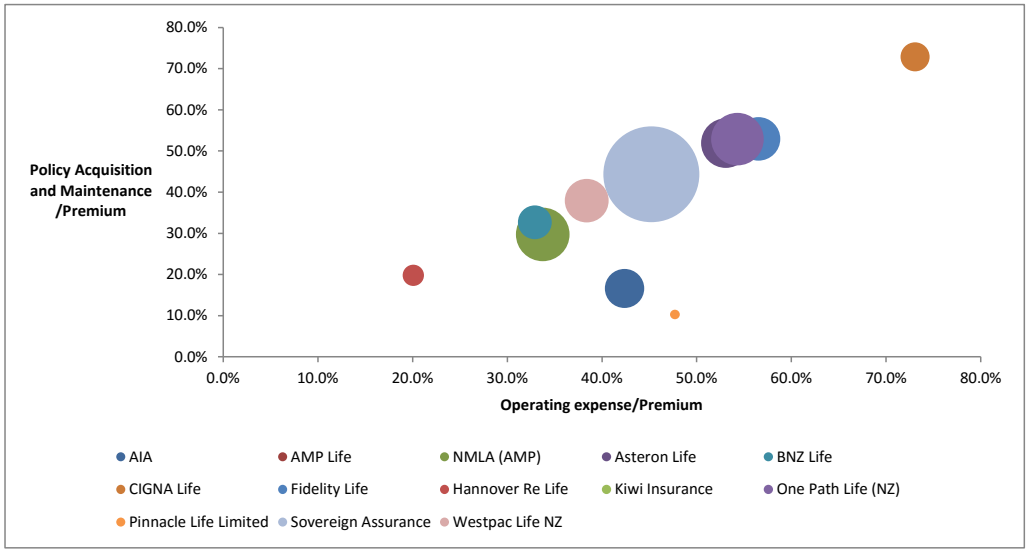
The following charts exclude data for the company Partners Life because it accounted for less than 3 percent of the average premium revenue over the period 2012 to 2014 and because we understand the Reserve Bank of New Zealand has instructed the company to reduce its reliance on reinsurance to fund business growth. We have included a footnote for each chart stating the data points for Partners Life.

The following charts compare various components of operating cost as a percentage of premium revenue as shown on the axes of the chart. The size of the bubble always represents each company's premium revenue. The horizontal and vertical axes in any given chart have the same length but can be different lengths for different charts.

The first chart compares policy acquisition and maintenance costs with operating expenses. For most companies, policy acquisition and maintenance costs account for almost all of the operating costs. AIA is the only notable outlier with policy acquisition and maintenance costs less than half of operating expenses. However the chart also indicates a wide variation in the level of operating costs as a proportion of premium revenue that does not appear to be related to the size of the company.

Figure 1 Insurance company operating costs[8]

Policy acquisition and maintenance and operating costs



Source: NZIER analysis of life insurance company financial statements

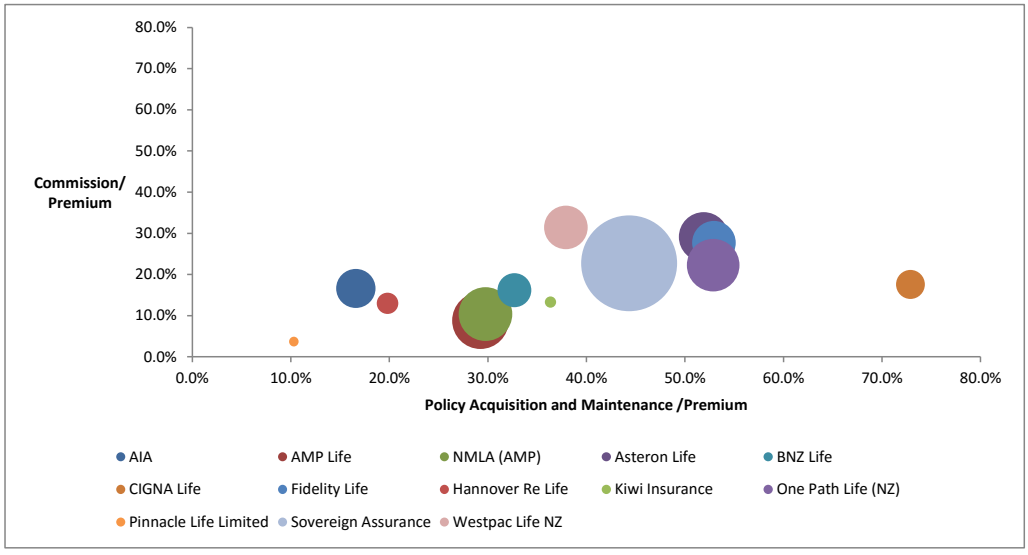
The following chart compares the relative contribution of commission and 'other' costs to the policy acquisition and maintenance costs (as a proportion of premium revenue). The chart indicates:

[8] For Partners Life the co-ordinates of the bubble on 'Figure 1 Insurance company operating costs' would be; 'Operating expense/Premium' 200.4% (horizontal axis) and 'Policy Acquisition and Maintenance/Premium' 204.4% (vertical axis).

- commission payments are a lower proportion of policy acquisition and maintenance cost than 'other' costs for nearly all companies except AIA
- a much narrower spread in the average rate of commission paid per dollar revenue of premium than in the spread of 'other' costs
- AMP and NMLA are notable for the relatively low level of commissions as a proportion of premiums.

Figure 2 Insurance company distribution costs[9]

Commission compared to policy and acquisition costs



Source: NZIER analysis of life insurance company financial statements

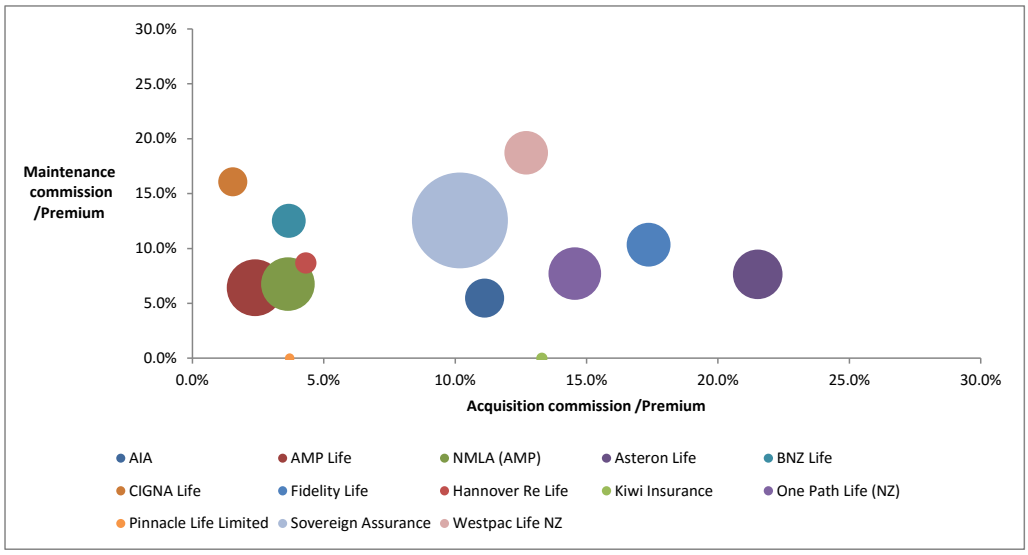
The comparison of commission payments to acquire versus maintain policies shown in the following chart suggests that companies are using different origination models:

- AMP/NMLA and BNZ Life have a low reliance on commission based sales to both acquire and maintain policies and are allocating much more of their commission expense to maintaining rather than acquiring business
- Asteron, One Path and Fidelity Life seem to have a heavier reliance on commission payments to acquire new policies and are paying slightly above market average levels of commission to maintain business
- Sovereign appears to be occupying a middle ground between these two models, because of its mixed distribution model

[9] For Partners Life the co-ordinates of the bubble on 'Figure 2 Insurance company distribution costs' would be; 'Policy Acquisition and Maintenance/Premium' 204.4%. (horizontal axis) and 'Commission/Premium' 138.1% (vertical axis).

Figure 3 Commission payments[10]

Commission paid to acquire and maintain policies



Source: NZIER analysis of life insurance company financial statements

3.4. Conclusions

Policy acquisition and maintenance costs consume a substantial part of premium revenue for all insurance companies but vary widely across companies and do not appear to be subject to economies of scale. For many companies less than half of policy acquisition and maintenance costs are commission payments suggesting that strategies to lower distribution costs need to consider the efficiency of both the commission and company distribution channels. The difference between company levels of commission payments as a share of premiums and also the balance between commissions to acquire and commissions to maintain policies suggests opportunities to change commission structures.

[10] For Partners Life the co-ordinates of the bubble on 'Figure 3 Commission payments' would be; 'Acquisition commission/Premium' 133.4% (horizontal axis) and 'Maintenance commission/Premium' 4.7% (vertical axis).

4. Potential for price reduction

4.1. Introduction

In this section we analyse the potential effect on average premium costs of a reduction in commission rates. We have been asked to consider the fall in premium costs if commission rates were reduced by 25, 50 or 100 percent and all of these reductions were passed on to the consumer. We assume that the reductions apply to new business and only affect the commissions paid on existing policies as these policies are terminated and are replaced by new business.

The maximum 'naïve' estimate of the reduction in premiums due to a reduction in commission rates is based on the commission cost as a proportion of premium income. However the proposed levels of reduction in commission rates are large and are likely to lead to independent advisers withdrawing from the market but through premium price reductions may also stimulate increased demand for insurance. These two factors alter the size of the market from which insurers can recover their fixed costs and also are likely to change the insurance products that are offered.

Therefore we present a naïve estimate of potential premium reduction and then discuss the information that would be required to develop a more realistic estimate of the potential for price reductions.

The premium income and commission costs used in this section are based on a combination of information from insurers financial statements and other market information and will be lower than those reported in section '3 Life insurance suppliers' for the following reasons:

- commission costs reported for insurers not using independent advisers are re-allocated to 'other' policy acquisition costs
- Hannover Re is not included in the other market information but has low levels of business in New Zealand.

4.2. Naïve estimate of commission reduction

We estimate that insurers using advisers paid average commissions of $221 m (180 percent) per year on new business of $123 m per year (over the period 2012 to 2014). These insurers wrote a further $62 m per year of new business through other channels, accounting for over 80 percent of the new business written. These insurers also accounted for $1,574 m (84 percent) of the average in force premium income and paid commission on this in force business of $152 m (12 percent) of in force business.

Assuming the reduction in commission cost is spread evenly over both new and existing policies for insurers using independent advisers, a 25 percent reduction in commission would allow an initial 3.5 percent reduction in premiums and a 50 percent reduction in commission rates would allow an initial 7 percent reduction in premiums.

These price reductions would increase over time as the replacement of existing policies lowered the trailing commissions on existing businesses. Once this process was complete a 25 percent reduction in commission would allow a total reduction in premiums of 6 percent while a 50 percent reduction in commission would allow a total reduction in premiums of 12 percent.

Estimating the effect of a 100 percent reduction in commission rates is problematic because it would imply that the adviser channel generates business at zero cost. To answer the question another way our data suggests that commission costs on new and in force business averaged 24 percent of premium income for insurers using advisers paid on commission.

4.3. Refining the estimate

A more realistic estimate of the potential for price reductions that could be achieved by reducing commissions would need to consider how distribution channels would respond to lower premiums and how this would affect insurers' ability to recover distribution costs. Questions to consider would include:

- response of the adviser channel to a combination of lower commissions and lower product prices. We understand from the information provided, that most of the sales through this channel are made by a small number of advisers. A reduction in commission rates may encourage this channel to become more efficient
- capacity of insurers to separate and scale back internal costs required to support advisers from other distribution costs as the reliance on advisers is reduced
- capacity and cost of the next cheapest 'large' distribution channel will set a floor on how far distribution costs can be lowered before the short-term saving in commission costs is negated by contraction in the insurers' business
- substitutability of the bundle of price and product features and access to customer segments achieved through advisers with the bundles of price and product feature and access to customer segments offered through other channels.

4.4. Estimated spread of adviser commission

One of the elements of a more realistic estimate of the effect of commission reductions on the distribution of life insurance is to analyse the current distribution of commission income across agents. This estimated distribution would be a starting point for considering how advisers might respond to a reduction in commission rates. We have combined the following sources of information to illustrate how the distribution of commission agent income could be estimated:

- Sovereign assessment of the distribution of commission income
- our estimates of commission income paid to advisers
- the number of registered financial advisers, reported at about 8,000.[11]

(The weakest points in this approach are the estimate of the number of advisers that are actively selling life insurance, and the assessments of their reliance on commission income and the level of income they could earn from other similar types of sales activity.)

The following table shows the first part of the estimate of the distribution of adviser incomes:

- translation of the Sovereign assessment into implied adviser income bands
- use of the implied income bands from the Sovereign assessment to allocate both the number of registered financial advisers (8,000 for this illustration) and total commission income ($374 m).[12]

Table 6 Estimate of adviser income distribution

Translation of the assessment into commission income bands

Assessment information		Adviser income bands		Registered financial advisers	
Share of advisers	Share of API	Share of advisers	Share of API	Number	Commission ($m per year)
1.2%	20%	1.2%	20%	96	74.7
6.5%	50%	5.3%	30%	424	112.1
20.0%	80%	13.5%	30%	1,080	112.1
50.0%	95%	30.0%	15%	2,400	56.0
100.0%	100.0%	50.0%	5%	4,000	18.7

Source: NZIER analysis of Sovereign data, insurers' annual reports and Financial Service Provider Register

The Sovereign assessment referred to annual premium income. Our analysis assumes that the average rate of commission is the same across all bands. However if the

[11] This number, 7,894 registered financial advisers, was the result of an advanced search at the Companies Office Financial Service Providers Register http://www.business.govt.nz/fsp/app/ui/fsp/record/searchFsp.do?adv=true with the parameters for 'Financial Services' set to 'Financial adviser' and 'FSP status' set to 'Registered'. This search does not include 'Authorised Financial Advisers' (approximately 1,800 advisers) and we do not have any evidence for estimating how many of these advisers would be actively selling insurance and more importantly whether insurance sales are core or peripheral to their business.

[12] Comprising commission on new business of $222 m and existing business of $152 m.

commission rates are higher for agents that do more business the above table will understate the allocation of commission costs to the 'highest selling' 6.5 percent of agents and overstate the payment of commission to most of the rest of the group. The following table shows the estimated average income for each band of advisers based on the number of advisers and total commission payment to each of the income bands in Table 8 above.

Table 7 Estimated average adviser commission income

Based on 8,000 registered financial advisers and commission income of $374 m

Registered Financial Advisers			Average income per adviser ($000)		
Number of advisers	Commission ($m per year)	Sales band	Total ($000)	New ($000)	Existing ($000)
96	74.7	Highest	778	462	316
424	112.1	High	264	157	107
1,080	112.1	Mid	104	62	42
2,400	56.0	Low	23	14	9
4,000	18.7	Low	5	3	2

Source: NZIER analysis of Sovereign assessment, insurers' annual reports and Financial Service Provider Register

The estimated average incomes of commission agents provide a starting point for assessing how advisers might respond to a reduction in commission rates. A crude starting point for the assessment would be the general income distribution.[13] The estimated average commission income of the 'highest' and 'high' sales band (6.5 percent of advisers (520)) is likely to be a core part of their total income that would be difficult to replicate in other activities, even with a 50 percent reduction in commission rates, suggesting that this group would be least likely to withdraw from the industry if commission rates were reduced. A 50 percent reduction in commission rates for the 'mid' sales band (13.5 percent of advisers (1,080)) would move them from 'high' to 'average' income levels, suggesting that they would consider leaving insurance sales and moving to other occupations. For the low sales bands (80 percent of advisers (6,400), commission income is likely to be secondary or peripheral to their main source of income. A 50 percent commission reduction would probably encourage many to leave the industry to avoid the fixed costs of remaining in the industry.[14]

4.5. Conclusions

The Sovereign assessment of channel use and the policy acquisition and maintenance costs from insurers' financial statements can be combined to estimate the average

[13] A more relevant starting point would be incomes for other types of selling activity that would require similar skills and rely on similar relationships and networks such as investment advice (which requires a higher level of education qualifications), sales of general insurance or mortgage broking.

[14] If a low cost model could be found to identify these advisers this segment of the market may offer an immediate opportunity for migration to a lower cost insurer owned distribution channel.

commission payments on new and in force businesses. The average commission costs indicate that a 25 and 50 percent reduction in commission rates could eventually allow at most a 6 and 12 percent reduction in premium costs after the reduction flows through trailing commissions. This is a naïve estimate of the potential for a reduction in premiums if commission rates were reduced.

5. Market drivers

5.1. Introduction

Sovereign market research has identified 'babies, marriages and lending' as the main triggers for the purchase of life insurance. We have been asked to comment on the connection between these drivers and market growth.

In this section we collate the available population based statistics over the past five to ten years to give an indication of the drivers of change in the number of potential life insurance customers as opposed to the value of the risk that they may need to insure. We also include statistics on insurance prices from the consumer price index CPI as an indicator of relative insurance price movements and information from the household expenditure survey. (Our data on market growth (FSC returns) covers the period 2006 to 2015).

Our sense is that the strongest data indicator of the number of potential life insurance customers is the census data that combines household composition and house tenure. Households that own their home with a mortgage, have dependent children and medium or high income seem to us to be the primary market for life insurance. We would expect that households with dependent children that are renting their house to be the next most likely buyers of life insurance based on their exposure to loss of income.

5.2. Data

The population indicators (household composition and tenure) that are most useful for assessing the size of the insurance market seem to be only collected in full as part of the census. Other population indicators such as births and marriages are reported more frequently but have a much narrower context,[15] which makes it harder to relate these numbers to the number of potential life insurance customers.

5.2.1. Primary market size indicator

The most comprehensive indicator of the total potential size of the life insurance market is the census data on household composition, income distribution and tenure. Unfortunately the publicly available census data tables do not combine all of these attributes in a single table.[16] In the following two tables we show the data structure that is available:

- household tenure reports owner occupied and rented housing and separates the owner occupied category into owned with and without a mortgage
- household composition – number of adults and dependents in owner occupied and rented houses.

[15] These measures report on one element of the drivers of the number of the potential life insurance customers and also usually on potential sources of increase rather than decrease in the number of life insurance customers.

[16] Statistics New Zealand may be prepared to create a customised data set that breaks-down the publicly available data in more detail.

Household tenure

Just under one third of households make mortgage payments. This group of households has grown by less than 3 percent over the period 2006 to 2013. Households living in rented houses are the fastest growing group, increasing by 13 percent over the period 2006 to 2013, and are now the largest tenure group. This suggests the segment of the life insurance market dependent on a mortgage as a buying trigger is barely growing.

Table 8 Household tenure

Number of households reported in the census and percentage change from last census

Tenure	2001	2006		2013	
	Number	Number	Change	Number	Change
Owner occupied - with mortgage	443,277	478,089	7.9%	490,812	2.7%
Owner occupied - no mortgage	413,550	393,870	-4.8%	416,772	5.8%
Owner occupied – unknown mortgage[17]	11,832	39,915	237.3%	33,147	-17.0%
Owner occupied –total	**868,659**	**911,877**	**5.0%**	**940,728**	**3.2%**
Rented	**412,200**	**451,965**	**9.6%**	**512,109**	**13.3%**
Not covered elsewhere	63,414	90,333	42.4%	97,053	7.4%
Total households	**1,344,273**	**1,454,175**	**8.2%**	**1,549,890**	**6.6%**

Source: Statistics NZ Tenure of household, for households in occupied private dwellings, 2001, 2006 and 2013 Censuses (RC, TA, AU)

Households with dependent children by tenure

Households with dependent children account for about one third of all households and this proportion has been falling gradually over the last two censuses. The proportion of households with dependent children living in owner occupied housing was about 32 percent in 2013, and this has also fallen over the past two censuses. (The publicly available data set on households with dependent children does not separate the data for owner occupied housing according to whether the household is making mortgage payments.)

The number of households living in rented houses has increased in absolute terms and accounts for almost 40 percent of households.

[17] The mortgage payment details for these households were not reported in the census.

Table 9 Households with dependent children by tenure

Number of households reported in the census and percentage change from last census

Tenure	2001	2006		2013	
	Number	Number	Change	Number	Change
Owner occupied –total	**300,087**	**313,218**	**4.38%**	**300,498**	**-4.06%**
Rented	**162,987**	**178,998**	**9.8%**	**203,034**	**13.4%**
Not covered elsewhere	7,635	13,254	73.6%	10,350	-21.9%
Total households	**470,709**	**505,473**	**7.4%**	**513,882**	**1.7%**

Source: Statistics NZ Tenure of household, for households in occupied private dwellings, 2001, 2006 and 2013 Censuses (RC, TA, AU)

We cannot definitively state from this data the proportion of households that have dependent children and own their house with a mortgage. If we assume that households with dependent children are as likely to have a mortgage as those without dependent children, this would suggest only about 10 percent of all households have dependent children and own their own house with a mortgage.

In addition to the data on household tenure and composition shown above, Statistics NZ also publishes data on income distribution by household tenure.

5.2.2. Secondary market size indicators

Statistics on marriages, births and housing loan approvals provide secondary indicators of the potential inflows of new customers into the life insurance market. We provide examples of the available data in the following tables and comment briefly on the interpretation of the data.

Marriage rates seem to have been relatively stable over the period 2001 to 2014. Birth rates surged over 2007 to 2012 but are now falling back to the levels of early 2001 to 2006. The number of housing loans grew rapidly during 2004 to 2009 and then remained flat before growing again in 2014.

The birth[18] and marriage indicators suggest a relatively constant inflow of potential new life insurance customers from year to year. The number of housing loans suggest periods of stronger growth in the recent past than over the past year. (Since August 2014, the RBNZ has started collecting a series on 'New Mortgage Lending'. This series counted 328,000 'new mortgages' over the year to July 2015. First home buyers accounted for 6 percent of the number of loans and 'owner occupiers' accounted for a further 74 percent of these loans.) Overall these indicators suggest faster growth in

[18] The birth rate potentially overstates the inflow of new customers as the trigger to buy life insurance is more likely to be the birth of the first rather than subsequent children.

the number of potential life insurance customers than is suggested by the census data.

However, the effect of these indicators on the potential number of life insurance customers is measured both more accurately and in more useable detail by the census data.

Table 10 Babies, marriages and loans

Annual numbers of births and marriages

Year ended 31 December	Marriages		Births		Housing loans	
	Number	Index	Number	Index	Number	Index
2001	19,972	1000	55,799	1000		
2002	20,690	1036	54,021	968		
2003	21,419	1072	56,134	1006		
2004	21,006	1052	58,073	1041	1,093,455	1000
2005	20,470	1025	57,745	1035	1,152,399	1054
2006	21,423	1073	59,193	1061	1,219,048	1115
2007	21,494	1076	64,044	1148	1,305,438	1194
2008	21,948	1099	64,343	1153	1,379,049	1261
2009	21,628	1083	62,543	1121	1,410,177	1290
2010	20,940	1048	63,897	1145	1,424,518	1303
2011	20,231	1013	61,403	1100	1,416,866	1296
2012	20,521	1027	61,178	1096	1,402,004	1282
2013	19,237	963	58,717	1052	1,435,770	1313
2014	20,125	1008	57,242	1026	1,470,986	1345

Source: Statistics NZ (for marriages and births) and RBNZ (for Housing loans)

5.3. Inflation data

Official statistics on inflation in the price of insurance as measured by the Consumer Price Index (CPI) and the pattern of household spending as measured by the Household Expenditure Survey (HES) are included to round out the review of the official statistics, but are difficult to link to movements in the number of potential life insurance customers.

5.3.1. CPI

Over the period March 2006 to March 2015, life insurance premiums (for new customers) recorded the lowest rate of increase (12 percent) of any of the insurance categories. Dwelling insurance premiums almost tripled while, health insurance increased by 84 percent, contents insurance by 45 percent and vehicle insurance by 19 percent.

5.3.2. Household expenditure survey

Household expenditure survey data for the years 2007, 2010 and 2013 does not seem to indicate the change in spending patterns that would be expected as a result of the price increases recorded by the CPI. Households seem to have increased their average weekly spending on life, dwelling and contents insurance by roughly the same percentage over the period 2007 to 2013. Also the proportion of households answering questions about insurance remained around 25 to 30 percent.

5.4. Conclusions

Indicators of the potential number of life insurance customers based on 'births marriages and loans' suggest a modest but steady inflow of new customers. However the census data on household tenure and number of dependent children suggest the following:

- households that own the house they live in and make mortgage payments account for just under one third of all households
- households that own the house they live in and have dependent children are a shrinking market segment and now account for about 30 percent of households that own their own house.
- households that rent are the fastest growing group of households.

Appendix A Insurance company financial data

Table 11 Life insurance company income and expenses

Average in $m for statements with balance dates occurring in 2012, 2013 and 2014

Item	AIA	AMP Life	NMLA (AMP)	Asteron Life	BNZ Life	CIGNA Life	Fidelity Life	Hannover Re Life	Kiwi Insurance	One Path Life (NZ)	Partners Life	Pinnacle Life Limited	Sovereign Assurance	Westpac Life NZ	Total
Premium revenue	102	215	193	164	77	56	128	31	9	185	38	6	616	127	**1,948**
Reinsurance paid	46	14	5	26	15	3	56	1	4	29	23	3	49	10	**285**
Investment income	10	275	183	44	4	6	40	3	0	6	0	0	164	9	**744**
Other income	0	177	8	0	0	0	7	0	0	6	0	0	7	15	**222**
Claims	39	217	186	92	34	21	63	23	3	66	13	3	331	49	**1,138**
Surrenders	12	0	0	35	0	0	0	0	0	12	0	0	136	0	**195**
Reinsurance recd	26	13	4	24	13	2	48	0	2	23	8	2	43	7	213
Operating cost	43	229	65	87	25	41	72	6	3	101	78	3	278	49	**1,083**
Movement in policyholder liabilities	-4	-107	-43	-10	1	0	1	0	0	-46	-17	1	2	9	-212

Source: NZIER analysis of insurance company financial statements

Table 12 Life insurance company policy acquisition and maintenance costs

Average cost as a percentage of average premium income for statements with balance dates occurring in 2012, 2013 and 2014

Item	AIA	AMP Life	NMLA (AMP)	Asteron Life	BNZ Life	CIGNA Life	Fidelity Life	Hannover Re Life	Kiwi Insurance	One Path Life (NZ)	Partners Life	Pinnacle Life Limited	Sovereign Assurance	Westpac Life NZ	Total
Policy acquisition															
Commission	11	5	7	35	3	1	22	1	1	27	51	0	63	16	**244**
Other	0	18	16	20	6	18	16	1	1	36	19	0	67	3	**220**
Total acquisition	**11**	**23**	**23**	**55**	**9**	**19**	**38**	**2**	**2**	**63**	**70**	**1**	**130**	**19**	**465**
Policy maintenance															
Commission	6	14	13	13	10	9	13	3	0	14	2	0	77	24	**197**
Other	0	26	21	17	7	13	17	1	1	21	6	0	66	5	**203**
Total maintenance	**6**	**40**	**34**	**30**	**16**	**22**	**30**	**4**	**1**	**35**	**8**	**0**	**143**	**29**	**399**
Total commission	**17**	**19**	**20**	**48**	**12**	**10**	**35**	**4**	**1**	**41**	**53**	**0**	**140**	**40**	**441**
Total other	**0**	**44**	**37**	**37**	**13**	**31**	**32**	**2**	**2**	**57**	**25**	**0**	**133**	**8**	**423**
Total commission and other	**17**	**63**	**57**	**85**	**25**	**41**	**68**	**6**	**3**	**98**	**78**	**1**	**273**	**48**	**17**

Source: NZIER analysis of insurance company financial statements

Table 13 Life insurance company costs as a proportion of premium revenue

Average in $m or statements with balance dates occurring in 2012, 2013 and 2014

Item	AIA	AMP Life	NMLA (AMP)	Asteron Life	BNZ Life	CIGNA Life	Fidelity Life	Hannover Re Life	Kiwi Insurance	One Path Life (NZ)	Partners Life	Pinnacle Life Limited	Sovereign Assurance	Westpac Life NZ	Total Market
Policy acquisition															
Commission	11.1%	2.4%	3.6%	21.5%	3.7%	1.5%	17.4%	4.3%	13.3%	14.6%	133.4%	3.7%	10.2%	12.7%	12.5%
Other	0.0%	8.2%	8.3%	12.2%	7.8%	31.8%	12.1%	2.1%	6.6%	19.4%	50.1%	5.1%	10.9%	2.4%	11.3%
Total acquisition	**11.1%**	**10.6%**	**11.9%**	**33.7%**	**11.4%**	**33.3%**	**29.5%**	**6.5%**	**19.9%**	**33.9%**	**183.6%**	**8.8%**	**21.1%**	**15.1%**	**23.9%**
Policy maintenance															
Commission	5.5%	6.4%	6.7%	7.6%	12.5%	16.1%	10.3%	8.7%	0.0%	7.7%	4.7%	0.0%	12.6%	18.7%	10.1%
Other	0.0%	12.2%	11.1%	10.6%	8.7%	23.5%	13.1%	4.7%	16.5%	11.2%	16.1%	1.5%	10.7%	4.1%	10.4%
Total maintenance	**5.5%**	**18.7%**	**17.8%**	**18.2%**	**21.3%**	**39.5%**	**23.4%**	**13.4%**	**16.5%**	**19.0%**	**20.8%**	**1.5%**	**23.2%**	**22.8%**	**20.5%**
Total commission	16.6%	8.8%	10.4%	29.2%	16.2%	17.6%	27.7%	13.0%	13.3%	22.3%	138.1%	3.7%	22.7%	31.4%	22.7%
Total other	0.0%	20.4%	19.4%	22.8%	16.5%	55.3%	25.3%	6.8%	23.1%	30.6%	66.3%	6.6%	21.6%	6.5%	21.7%
Total commission and other	**16.6%**	**29.2%**	**29.8%**	**51.9%**	**32.7%**	**72.9%**	**52.9%**	**19.8%**	**36.4%**	**52.9%**	**204.4%**	**10.3%**	**44.3%**	**37.9%**	**44.4%**

Source: NZIER analysis of insurance company financial statements