Practical aspects of the Gender Directive for mortality insurance

Kurt Lambrechts

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INTRODUCTION

21 December 2012 is an important date.

First of all, at that day the 3,000-year-old Maya calendar is said to come to an end. For some people this also means that the world will end on that day. If you are one of them, then don't bother reading any further.

Second, from this date onwards gender can no longer be used in the European Union as a pricing factor for premiums of new individual life insurance contracts.

In a world where insurers rather tend to increase the level of segmentation so that premium prices are sharply tailored to specific risks/health of the insured, unisex tariffs for life insurance would actually be an uncommon move in the other direction.

This white paper discusses some basic effects of combining two known heterogeneous groups in one single tariff.

GENDER MIX

First of all, any qualified actuary can tell you how tariff tables for men and women can be mixed in order to obtain a unisex tariff. Usually this does not involve mixing existing premium rates, but rather the underlying—and significantly different—mortality rates for men and women.

Insurers might want to build in a safety margin here by increasing the weight used for men in mortality insurance and that of women in annuity business. The fact that disabling a segmentation criterion increases the total tariff for the entire population is the most direct effect of unisex rates.

It is also important to have these mortality rates weighted by the insured capital, since there is still evidence that insurance coverage differs between both sexes. This step turns the pricing focus from the risk per insured person towards the risk per insured currency amount. The result would then be that male mortality rates get a higher weight in the unisex tariff.

Of course, this weighted ratio between the genders must be monitored closely. Client behaviour and underwriting effects after 21 December 2012 may result in a new equilibrium.

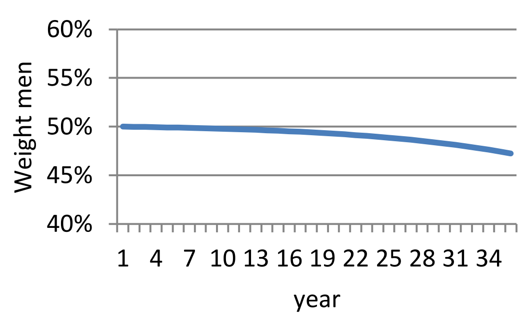
Insurers that focus on specific occupations must also be aware of social trends in the profession's mix of men and women.

RISK PREMIUMS

Assume for a moment that the ratio of men/women at entry is determined and constant. Even then, some practical aspects are involved.

Take, for instance, mortality covers that are paid with risk premiums. This means that the premium paid during a specific period only covers the mortality risk of that period. Obviously, this risk premium then increases with age.

Since we know that men have higher mortality rates than women, the effect for a group of contracts with about the same entry date will be that the weight of women would gradually increase.



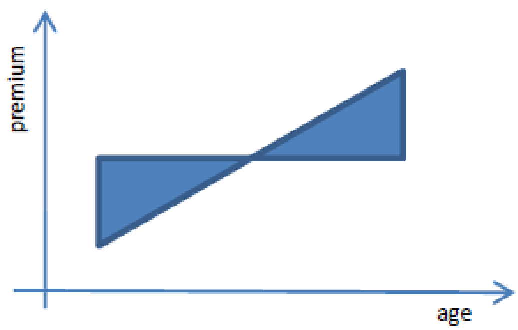
If the entire tariff (the level of future risk premiums) is being guaranteed at the entry date, an insurer may want to anticipate this to keep its unisex tariff sharp.

Entry age is then an optional extra pricing factor.

LAPSE INCENTIVE FOR MEN

The effect in the previous paragraph does not hold for contracts with levelled premiums.

In these contracts, the premium is fixed over the entire premium paying period. This means that at the start, the levelled premium is higher than a strict risk premium for that age, in that way building a reserve for later ages when the risk premium exceeds the levelled one.



Here, subsidization is primarily over time and the evolving men/women ratio does not interfere.

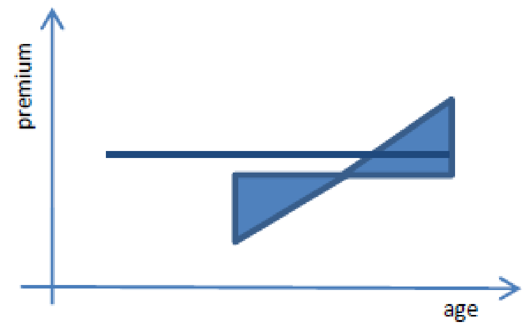
However, another effect looms around the corner.

Since a unisex mortality tariff is expected to be lower than the current tariff for men, the latter (or their brokers) may be tempted to lapse ongoing contracts and take new ones after 21 December.

There is no need to say that for *all* mortality contracts with risk premiums, or with levelled premiums where the built-up reserve can be transferred to another contract, there is an incentive for men to lapse their current contract and take a new one at unisex tariff. This alone will temporarily impact the post-2012 ratio between men and women in new business.

We wondered to which extent this would also be the case for contracts with levelled premiums, where the male policyholder has no claim on the built-up, still unused reserves inside his contract.

An incentive to lapse exists here only during the first years of the contract, as long as the new unisex levelled premium, at the age reached on 21 December 2012, is lower than the levelled premium which was based on the original lower entry age of the contract.



We did this exercise for the Belgian situation by taking a 50/50 mix of current gender-based tariff mortality rates, without any further charges.

Based on these assumptions, our conclusion is that for almost all contracts of less than five years old, the new unisex premium for men would be lower than what they are paying now, even if this means they lose the built-up reserves of their current contract.

	Until which policy year is the premium for a new contract with unisex tariff cheaper than the original male tariff premium of an existing contract ? Entry age existing contract										
End Age	30	31	32	33	34	35	36	37	38	39	40
55	6	6	6	6	6	6	5	5	5	5	5
56	6	6	6	6	6	5	5	5	5	5	5
57	6	6	6	6	5	5	5	5	5	5	5
58	6	6	6	5	5	5	5	5	5	5	5
59	6	6	5	5	5	5	5	5	5	5	5
60	6	5	5	5	5	5	5	5	5	5	5
61	5	5	5	5	5	5	5	5	5	5	5
62	5	5	5	5	5	5	5	5	5	5	4
63	5	5	5	5	5	5	5	5	5	4	4
64	5	5	5	5	5	5	5	4	4	4	4
65	5	5	5	5	5	5	4	4	4	4	4

If one expects policyholders to lapse only when the price difference becomes significant, we still determined that an indifference to a price reduction of up to 15% would be required to completely rule out possible mass lapsation.

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CONTACT

For more information, please contact:

Kurt Lambrechts (Brussels)
kurt.lambrechts@milliman.com

Robin Preijer (Amsterdam)
robin.preijer@milliman.com