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Possible Market Implications of Unisex Insurance Pricing*

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The main reason for different insurance premiums and benefits is the use of different statistically proven risk factors in actuarial calculations for individuals. Basing its ruling on European Union Directive 2004/113/EC (the Gender Directive), the European Court of Justice on 1 March 2011 concluded that any gender-based discrimination is prohibited, so gender equality in the European Union (EU) must be ensured from 21 December 2012. The ruling definitively banning the use of the gender criterion in actuarial calculations for individual prices may have important consequences for the insurance industry and customers in the EU. In this short text, a number of implications are discussed. Possible consumer behaviour and potential responses from market players are outlined as well as possible further regulatory interventions. The implications of the definitive ban on gender-based discrimination are extensive for the insurance industry and may have a strong economic and legal impact on the individual product offering and pricing.

Customer reactions and adverse selection effects

Following the ban on gender-based discrimination, insurers and policyholders will have unequal access to information on gender characteristics, which may result in further adverse selection effects, as described by Akerlof (1970). Even if the gender characteristic of customers is taken into account by the insurer at the overall portfolio level, adverse selection effects are enhanced whenever one group of policyholders has to pay an increased risk premium for a statistically lower risk. This may have an impact on the demand for insurance products, at least for markets with low price inelasticity. In the extreme situation of full adverse selection, the subsidising policyholder group (second group) will no longer take out any insurance policies at all (if not compulsory or critical; see Thiery and Van Schoubroeck, 2006) and thus in the long run, the portfolio may be formed solely by the members of the first group, which has a higher claims expectancy. Prices will be adjusted accordingly and finally, only one price—the one for the more costly policyholder group—will remain. Furthermore, cross-subsidies between insurance groups of different genders are implied. The higher claims expectancy of the one group will be distributed to all other policyholders of the second group.

The resulting decrease in customer demand may lead to a future limitation on the product offering and to a possible withdrawal by competitors from certain less profitable product lines. Once insurance solutions have been abandoned, substitute products may become attractive. Forms of self-insurance or mutual/investment funds for retirement arrangements may be preferred. Overall, the insurance market may decrease in size along with the quality of the insurance benefits. These effects may be stronger in the annuity and life insurance market, as such insurance is not compulsory, unlike motor insurance, for example (Oxera, 2011).

On the other hand, for compulsory insurance lines (for example, motor insurance), further moral hazard behaviour may occur, meaning that excessive risks may be taken and that the average risk level may increase.

Finally, let us note that the ban on gender-based discrimination may also give rise to positive reactions from consumers. For example, customers may perceive the insurance industry as ethically and socially better or even

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more consumer-friendly—especially in light of the fact that effective gender-specific price differences are less accepted.

Possible reactions by the insurance industry

From an insurance industry perspective, several new challenges arise regarding product development and actuarial calculation. Owing to unisex pricing, it is no longer possible to use gender as a risk criterion for individual pricing of policies. In accordance with the provisions of paragraph 17 of the Guidelines on the Application of the Gender Directive, “the use of risk factors which might be correlated with gender [...], as long as they are true risk factors in their own right” is allowed. Thus, a calculation of the risk of damage cannot only take place at the level of the insurance portfolio (including the consideration of gender). However, the definitive premium only represents a mixed tariff (which may be a weighted average by the gender-mix in the portfolio). The results are adverse selection of policyholders and hybrid product tariffs (GCAE, 2011). Because the use of the gender criterion is no longer allowed, market distortion will result. Cross-subsidisation from high-risk policyholders to low-risk policyholders will result.

To achieve an equitable spread of risks in their portfolio, insurers may provide increased direct incentives to specific target customers. Strategic marketing may then include gender-specific sales campaigns (for example, in magazines with a strong gender-specific readership) and gender-specific individual product offerings (EC, 2012). In addition, insurance companies may make increasing use of risk criteria which are correlated with gender if they are independent risk factors, for example, the size of a car engine for motor insurance (EC, 2012). The available customer data will be increasingly analysed and correlated risk criteria developed without having to establish a direct reference to gender. Furthermore, the importance of the use of other risk factors independent of the gender criterion may increase, for example, for motor insurance, the length of the customer’s driving experience, vehicle safety features and maybe (in the near future) driver tracking technology. These effects lead to a reduction of adverse selection, as the pricing will be based on several risk criteria (not including gender) that may end up mapping risks more precisely than today’s use of the gender criterion alone. We will keep in mind, however, even if this price ends up being more equitable, that one factor (namely gender) still remains unused. The transaction costs as well as the administration expenses and the risk premium may increase for insurance companies (Kochskämper, 2011).

An additional opportunity for portfolio selection is through the modification of the sales commission and through incentives to sales staff, for example, higher commissions for acquiring customers from among the lower-risk gender. The result can be a deliberate exclusion of customers in specific tariffs (for example, private insurance, where acceptance of customers is not compulsory under applicable law) and hence, an increase in the adverse selection phenomenon (Kochskämper, 2011). The termination option of existing contracts emphasises this effect. Current customers may terminate their old contract and conclude a new one with the unisex tariffs if the latter are more favourable (depending on the product line and the individual gender). In particular, contracts that can generally be terminated at short notice may imply relatively fast reactions (see, for example, yearly contracts for motor or private health insurance policies) and changes in the insurer’s portfolio composition. Brokers and their corresponding commission scheme for contract renewals may accelerate this trend. Hence, additional transaction costs will be paid by switching policyholders until a new equilibrium with one unisex price is finally established in the market (Kochskämper, 2011). An increased premium level in unisex tariffs could merely cushion this effect. The aforementioned study by Oxera (2011) predicts that the gender-neutral uniform tariff could result in higher premiums for one or the other gender depending on product lines. On the one hand, a 40-year-old woman may have to pay over 30 per cent more for life insurance, while a 20-year-old woman could have to pay 11 per cent more for motor insurance. On the other hand, a 50-year-old man could pay 5 per cent less for annuity insurance.

In an insufficiently competitive oligopolistic market, higher average prices due to market-sharing agreements may result. Gender-neutral premiums may be higher than the accumulated previous rates weighted for men and women because of adverse selection. In part, this is because it is more difficult to calculate an alternative risk criterion by collecting and evaluating data regarding the social and economic circumstances of an insured person, and a risk

premium may be levelled. Furthermore, those risk factors can change over time and, therefore, may indicate a higher uncertainty for insurers. In addition, in the aforementioned preferred group of policyholders, a “levelling down effect” may be observed and, in the previously disadvantaged group, a “levelling up effect”.

The contemplated effects depend, for example, on the amount of the premium, the benefit differences, the transparency of premium calculation for policyholders and finally, on the action that customers take to switch tariffs. It is expected that some customers will buy fewer insurance policies due to higher premiums. Policyholders with a better-than-average risk profile may churn, and the average risk may increase because of adverse selection. To cover the average risk probability and the uncertainty, insurance companies could adopt premium loading or raise the safety margin.

Regulatory intervention

The gender-neutral premium calculation requires major changes on the part of insurance companies. It may be expected that alternative risk criteria or combinations of risk criteria will take more precedence, for example, “risk factors which might be correlated with gender, as long as they are true risk factors in their own right”, for example for motor insurance, car engine size (EC, 2012). It therefore follows that a prohibition of the use of the single gender criterion does not automatically result in gender neutrality in insurance pricing (ABI, 2010). Such reactions from the insurance industry may lead to further governmental or regulatory intervention in pricing and product development. At the moment, pursuant to Paragraph 18 of the Guidelines on the Application of the Gender Directive only the use of the gender criterion is prohibited (EC, 2012). In November 2000, the EU Council adopted Directive 2000/78/EC for establishing a general framework for equal treatment in employment and occupation independent, for example, of someone’s age. Furthermore, the Commission of the EU decided in July 2008 in a proposal for a Council Directive to implement “the principle of equal treatment between persons irrespective of religion or belief, disability, age or sexual orientation” outside the field of employment. The ban on other differentiation criteria, for example age or health status, may result. Each intervention in the pricing mechanism may lead to market distortions and may impair the principle of (statistically) fair contributions and benefits.

References

- Akerlof, G. (1970). The market for “lemons”: Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics* 84(3): 488–500.
- Association of British Insurers (ABI). (2010). *The use of gender in insurance pricing: analysing the impact of a potential ban on the use of gender as a rating factor*. ABI Research Paper No. 24, London: Association of British Insurers.
- European Commission. (2012). Guidelines on the application of Council Directive 2004/113/EC to insurance, in the light of the judgement the Court of Justice of the European Union in Case C-236/09 (Test-Achats). *Official Journal of the European Union* C11: 1–11.
- Groupe Consultatif Actuariel Européen. (2011). *Use of age and disability as rating factors in insurance: why are they used and what would be the implications of restricting their use?*, position paper.
- Kochskämper, S. (2011). *Der Einfluss der Europäischen Union auf die Finanzierung der Gesundheitsversorgung in den Mitgliedstaaten*, Otto-Wolff-Institut Discussion Paper 03/2011, Köln: Otto-Wolff-Institut für Wirtschaftsordnung (OWIWO).
- Oxera. (2011). *The Impact of a ban on the use of gender in insurance*, Oxford: Oxera Consulting.
- Thiery, Y. and Van Schoubroeck, C. (2006). Fairness and equality in insurance classification. *The Geneva Papers on Risk and Insurance—Issues and Practice* 31(2): 190–211.