JIFM JOURNAL OF INSURANCE AND FINANCIAL MANAGEMENT

Notes On Insurance Company Management

Raimo Voutilainen [a,*]

[a] *PhD, Adjunct professor, Aalto University, Finland*

ARTICLE INFO

Article History

Submitted	08 Nov 2021
Accepted	09 Nov 2021
Available online	16 Dec 2021

JEL Classification

G22

Keywords

Insurance Company Management
Board Perspective
Managing Director Perspective
Solvency II

ABSTRACT

The author presents his observations on insurance company management based mainly on his own management experience and his own research work. After a review on academic literature, the author discusses important points of view of insurance company management. He discusses the foundation of an insurance company, the management of an ongoing insurance company, perspectives for the board of directors and the managing director of a company, and the termination of an insurance enterprise. The author gives plenty of examples from the Finnish insurance industry.

Journal of Insurance and Financial Management

*Corresponding Author:
raimovoutilainen8@gmail.com

Acknowledgement: The author is indebted to Pekka Luukkanen and Jari Sundstrom for their comments to the manuscript.

1. Introduction

This article is a summary of the most important features the author has experienced about insurance company management during several decades in leading positions in insurance companies. Managing an insurance company has naturally lots of same elements as management in general. These are e.g., cost control, liquidity control, budgeting, supervision of bookkeeping and accounts, HR and building team cooperation and spirit. Those are omitted in what follows, and only management requirements typical to insurance industry are discussed.

Chapter 2 includes literature review. In chapters 3-6 the author discusses the foundation of an insurance company, the management of an ongoing insurance company, perspectives for the board of directors and the managing director of a company, and the termination of an insurance enterprise. Chapter 7 presents concluding remarks.

2. Literature Review

In the literature, most articles and books are fairly sophisticated for a general manager. The early handbook edited by Diacon (1990) is, however, rather practical. Chandnani (2017) gives an extensive glossary of 7.500 words from general insurance, reinsurance and risk management.

Risk management is vital for any enterprise, and extremely important for an insurance company which covers its clients' risks. Insurance company risk management for life insurance companies is covered by Bohnert et al. (2015), Gerstner et al. (2007), and Koller (2011). Nonlife insurance company risk management is covered by Mulvey and Erkan (2003), who discuss the very widely used scenario generation and simulation, and Andreeva (2020). Insurance risk management from the reinsurance point of view is discussed by Gorge (2016), whose presentation is quite mathematical and includes Solvency II requirements.

Mathematical risk theory gives quantitative foundations for understanding and managing the risk process of an insurance company. The fundamental work here has been done by Beard et al. (1990) and Daykin et al. (1994). More recent are the books of Bühlmann (2014) and Dickson (2017).

In the EU, each life and nonlife insurance company must nowadays comply with Solvency II framework stipulated by an EU directive. Following Solvency II regulation is a major process for the board of directors and CEO of an insurance company, and there is ample literature about the topic. The handbook of solvency for actuaries and risk managers by Sandström (2016) is a large (1025 pages) handbook for general use. The monograph by Laurent et al. (2016) for modelling life insurance encompasses Solvency II issues, e.g. internal models and ORSA modelling.

According to Solvency II, it is critical to make a right choice between the Solvency Capital Requirement Standard formula and an internal model. Implementing either of these requires lots of hard work. Scherer and Stahl (2021) provide a critical discussion on the standard formula. Baione et al. (2021) discuss capital allocation and RORAC optimization under the standard formula. Braun et al. (2017) discuss portfolio optimization under the market risk component of the standard formula.

Gatzert and Martin (2012) compare the standard approach and internal model in view of credit and market risks. Also, Torzi (2015) compares the standard formula and an internal model. Floryszczak et al. (2016) calculate net asset values and solvency capital requirements with Monte-Carlo approach in the case of an internal model. Cadoni (2009) and Ronkainen et al. (2008) discuss internal models, the latter from the point of view of the Finnish Insurance Supervisory Authority.

Voutilainen and Ruuskanen (2015) study the effect of intensified regulation (mainly Solvency II) on the product strategy of Nordic life insurance companies.

Other insurance company management related studies are Matis and Ilies (2014) on customer relationship management in the insurance industry, Kasturi (2006) on performance management in an insurance corporation, Wegmann (2008) on the balanced scorecard as a knowledge management tool in a French insurance company, Vazov (2019) on insurance company cash flow management, Hoang et al. (2017) on blockchain-based data management and analytics in a pay-as-you-go car insurance application, Voutilainen (2005), Korhonen and Voutilainen (2006) and Voutilainen (2021) on alliances of insurance companies with banks, and Voutilainen and Koskinen (2019) on megatrends in the insurance and financial sector.

3. Foundation of an Insurance Company

In the following, the legal framework and the business environment are Finnish, but they are quite comparable internationally.

Insurance business is regulated by the law, and the foundation of an insurance company is strictly stipulated in the Finnish Insurance Company Act (ICA). The fundamental element of the foundation phase is the licence application for the composition of which a project group is assembled. Representatives of the owners of the forthcoming company are gathered there. If the company has already been founded (not yet an insurance company), its board is a natural project group. If the founders do not have sufficient knowledge about actuarial matters and ICA, such competence is available commercially. If the managing director takes on his position before the licence is granted, he or she naturally joins the project group.

ICA sets strict requirements for the activities of an insurance company both in the foundation phase and later. Obedience of these requirements is by the law monitored by the Finnish Financial Supervisory Authority (FSA) which is authorized to accept or reject the licence application. FSA wants to especially convince themselves that the solvency of the company is in the beginning on a sufficient level – this requires generally adequate reinsurance cover and that the board, managing director and other keypersons pass the Fit & Proper clearance which has to clarify that each person is besides competent for his/her position also “a good citizen”, i.e., intact and sovereign. The board also has to be Fit & Proper as a whole regarding the key functions of the company.

It is customary that the founding project spends especially large amount of time for the planning of the administration system and the action plan of the forthcoming company, calculations for the two first pillars of Solvency II, and planning the documents for outsourcing. Here consulting support is often in order.

We shall present briefly insurance companies founded in our country and motivations behind those. When major industrial enterprises in Finland became stronger, many of them founded so-called captive companies for insuring their own risks. Those captives have no other clients. The term “captive” is nowadays also used to describe such mutual insurance companies which are owned by a certain restricted domain, e.g. Finnish Mutual Insurance Company for Pharmaceutical Injury Indemnities and Finnish Mutual Patient Insurance Company.

In the following, the most significant insurance companies founded in Finland since 1993:

- The subsidiary of Union Bank of Finland: Stella, nowadays a subsidiary of Nordea: Nordea Life, the biggest life insurance company of the Nordic countries
- The subsidiary of the cooperative banks: Aurum, nowadays a subsidiary of the Cooperative Banking Group: OP Life
- The subsidiary of Post Bank: Leijona, nowadays part of Mandatum Life
- The life and nonlife branches established by the English Consolidated Insurance Group (CIG) in Finland, nowadays part of AXA Finland
- The subsidiary of the Swedish Robur, part of Swedbank: Robur Life, nowadays part of Aktia Life.
- The life insurance company established by the savings banks and Local Insurance Group: Duo, nowadays SP Life
- The Finnish Nonlife Insurance Company founded by the Local Cooperative banks
- The regional companies of LocalTapiola which assumed the role of the earlier local insurance associations
- Fennia Life established by Nonlife Fennia
- The merger of the mandatory pension insurance companies Pension-Tapiola and Pension-Fennia forming Elo Mandatory Pension
- The nonlife company Nordea Insurance Finland established by Nordea Life Finland
- The only shareholder and client of Finnish Mutual Insurance Company for Pharmaceutical Injury Indemnities is The Finnish Pharmaceutical Injury Indemnity Cooperative the members of which are pharmaceutical manufacturers, marketers and research companies active in Finland
- The shareholders of Finnish Mutual Patient Insurance Company are the five university health care districts of Finland

The strong belief behind the foundation of Stella, Aurum and Leijona was that a bank is an outstanding sales channel for life insurances, see Voutilainen (2005), Korhonen and Voutilainen (2006), Mäenpää and Voutilainen (2011), Voutilainen and Koskinen (2019) and Voutilainen (2021). The later experience has verified this. CIG imported to Finland the credit protection insurance which has then become a standard part of loan offering in banks. Robur Life introduced unit linked insurances to Savings Banks Group. Duo was changed to SP Life after Local Insurance had merged with Tapiola, and Local Insurance could not have two life companies. The regional companies of LocalTapiola continue the tradition of local insurance associations. Elo is currently one of the three big Finnish mandatory pension companies. Nordea Insurance complements the personal cover offered by Nordea Life by nonlife insurances. Pharmaceutical injury indemnity insurance and patient insurance companies were established because of new legislation.

It is obvious from the above list that the majority of the established genuinely new operative companies are life companies. Among the founders there are five banks including the biggest banks in Finland. The banks have wanted to utilize the effectiveness of the bank sales channel especially in the sales of savings and loan protection insurances and wanted to have the dominant role in the definition of the conditions of the cooperation.

In addition to the above-mentioned establishments of new insurance companies we want to mention two significant insurance company arrangements: The foundation of LocalTapiola Group as Tapiola Group and Local Insurance Group were united and the deal where Cooperative Banking Group acquired mastery in the nonlife company Pohjola. The cooperative banks had already the life company OP Life, and now they got a nonlife company, too. An important motivation for the deal was the enabling of cross selling between bank and nonlife products, and by using OP bonuses this cross selling has succeeded well.

4. When the licence has been received

When the licence has been granted and maybe already in the finishing phase of the application the recruitment of key personnel has to be initiated. In the organisation there are normally the following functions:

- Managing director
- Actuarial function / Responsible insurance mathematician
- Legal affairs
- Economy
- Investments
- ICT
- Marketing
- Production
- Compliance
- Risk management
- Internal auditing

Some functions are even required by the legislation, e.g., Managing director and Actuary, some are voluntary, e.g., marketing.

It is possible to outsource and combine functions quite widely, but FSA requires that the resulting functions are reliable. In outsourcings attention must be paid to e.g., time consumption of the outsourcing partner and the avoidance of conflicts of interest. In big companies it may be necessary to split functions, e.g., Production to Insurance production and Claims production.

In statutory insurances outsourcing is restricted, and in some outsourcings, FSA requires that the outsourcing partner is an insurance company.

According to the statutes the board has to be qualified for its duties (Fit & Proper) both in the beginning of the company and continuously in all phases of its life cycle. To accomplish this the board has to be given continuous education about all topics relevant to its task. One of these topics is ORSA (Own Risk and Solvency Assessment), where the risk and solvency status of the company is assessed and the assessment is presented to FSA annually. The risk management function of the company is responsible for the preparation of the assessment, but the board has to have an opinion on the presumptions of the assessment (especially so-called scenarios; the outcome of the company given each scenario is crucial content of the assessment). This requires multiple sessions in the board.

Besides ORSA, the board has to understand sufficiently other parts of the Solvency II framework, e.g., solvency ratio and its determination. This requires education, too.

When the company has started and its organisation has been manned its administration system with all its guidelines has to be updated sufficiently from the version included in the licence application.

5. Views on insurance company management both for the board and the managing director

Insurance business is strictly regulated by the law, and on the other hand managing insurance company commitments requires steady insurance mathematical knowledge. There have to be enough of both these competences in the company, and the managing director has to have adequate understanding on both insurance law and mathematics.

The strength of insurance regulation differentiates it probably from the management of all other industries. (Banking might be on the same level.) The purpose of the regulation is naturally to protect the interests of the insureds. Regulation and its effects on the business and on the management of the business might surprise an observer who does not know the industry.

One special feature of the industry is the sensitiveness of customer data: For example, the EU data protection directive GDPR determines customer health data to be the most sensible possible data, and this sets naturally significant special data security requirements on systems, office spaces, processes et al.

Relations with owners have to be in order by sufficiently frequent contacts. This applies especially to the chairman of the board and the managing director. Contact methods besides annual shareholders' meetings vary greatly. In a mutual company the owners are clients and owners of guarantee capital, and the owner relations are mostly client relations. In a limited company owners and customers are mostly differentiated. Besides owners, the company must also manage relations with other cooperative partners.

Product management in an insurance company is a continuous process, and the board and the managing director are responsible for it. All companies try to continuously figure out which new products their owners and clients would be interested in. The management of the company has, however, the steering responsibility in strategic product development. International communications and competitor analyses are important here.

In the following, there are examples of current product development trends in Finnish insurance companies:

- In incentive based insurances a customer can by his/her behaviour receive premium discounts or other benefits. Traditionally, it has been possible to receive discounts from property insurance premiums by loss prevention actions. Bonus systems of vehicle insurances reward a customer for no claims. In more recent incentive based personal insurances a customer may have a wristband or a corresponding sensor measuring the physical activity of him/her. High activity decreases premium or e.g., increases the insured sum. Sensors can be installed in cars which send the data according to which a driver can be rewarded for careful driving. More closely, see Voutilainen and Koskinen (2017).
- Foreign insurance companies bring sometimes new products to Finland, like the British CIG in 1994. They introduced in Finland credit protection insurance which has become a substantial additional income source for banks. Some other foreign companies have brought, using various sales channels," trash insurances" which do not offer big added value for a customer. (Trash insurance is a health insurance with extremely narrow set of possible insurance events, most often one illness. It can be defined as a special case of Critical Illness insurance.) The introduction of personal insurances by foreign insurance companies in Finland is difficult because of the special features of our national social security and the double taxation of some insurance compensations.
- More and more insurance companies and even banks sign up as suppliers of some kind of "cover for a good and a bad day". The cover for a bad day is there a traditional risk insurance, and the cover for a good day a possibility for a customer to invest his/her assets in a profitable and secure way. More closely, see Voutilainen (2018).
- Some insurance companies have wanted to distance from the loaded term "insurance" and declared themselves as care taker or "life security" companies. This kind of concept can be built around health insurance, and also around other personal insurance or even nonlife insurance. There is idea in this concept, if it includes more than only a new term, like integrated wellbeing service. The Life Security of LocalTapiola is wide and consists of three topics: Health, security and economy. This concept can be connected to the above-mentioned incentive based insurance. It can also be understood as an expansion of the cover for a good and a bad day.
- In corporate insurance personnel reward products are a rising trend. This can be accomplished by group pension insurance or individual pension insurance bought by a corporation. Personnel funds compete with insurances to some degree, but they can also be used together with an insurance. Traditional bonuses are still useful, but taken through a personnel fund they are received slightly less taxed.
- Work wellbeing services by mandatory pension insurance companies are a side product of pension insurance which is offered quite actively currently. With them it is possible to promote employees' ability to cope, but there are also problems. FSA has intervened their use e.g., because of their coverage (too big inputs and costs) and their use in marketing as "discounts".
- An example of client-centric product development of mandatory pension companies is the development of disability pension premium to be more transparent and fairer for all their corporate clients.
- New tariff factors can be important in competition in other than statutory insurance lines. In the incentive based insurance in bullet point 1 new tariff factors are introduced. Other examples are the consideration of residence and occupation in

personal insurances. Consideration of claims history i.e., Experience rating is also widely used.

On the other hand, some tariff factors have been banned, e.g., gender, even if it is insurance mathematically completely justifiable and a very important criterion e.g., in health and pension insurances. The reason for the ban is the promotion of equality, not insurance technically correct risk pricing. It is interesting how politics and insurance mathematics are mixed, and politics wins.

One of the most important things the management of an insurance company has to follow is the development of the solvency of the company. Investment success has to be followed closely especially when the company has given out full investment mandates. The distribution of the assets to asset classes and inside classes to various instruments has a high impact on the company's solvency. Naturally, the structure of the technical reserves affects it greatly, too. The relation of a company's own funds and the solvency capital requirement or in Solvency II language SCR is called solvency ratio, and following its development is the highest priority of the board and the management. There have to be clear rules how to act with various values of the solvency ratio.

FSA holds with all its supervised companies regular supervised meetings which require much attention by a company. The supervisor gives the agenda for each meeting, and it is obligatory for each relevant person to participate. The company needs to prepare for expected questions.

Sales channel strategy is also an important object for planning. Sometimes, owners form a sales channel, like in Bancassurance. Then the owners may limit the use of other sales channels. Other than bank-owned companies have often several parallel sales channels.

The board and management of an insurance company have to invest in HR. The salary level and staff benefits have to be competitive. The performance of the personnel has to be followed, of course, but they must also be given necessary support. In a modern company there is also a reward system which is objective and fair.

Customers have to be treated fairly. Two examples of unfair treatment:

Investment fund changes of a unit linked insurance are tax-free during savings period, but this property is useless if a customer has in his/her policy only one fund and he/she does not intend to acquire more funds. The customer pays then for a useless feature. A mis-selling has taken place.

There was a news item from statutory accident insurance lately that claims handling times of a big company were as long as two years. This is extremely unfair for the person who has suffered an accident. On the other hand, it is good to recognise that if a customer leaves a completely incomplete application based on which it is impossible to make a legal and justifiable decision and he/she does not in spite of requests send the required additional explanations, the customer feels that the case has been open two years even if the company has not been able to make the decision because of the reasons on the customer side.

Monitoring and performance measurement of outsourced functions are important duties of the management. If everything does not go as agreed, it is vital to tackle problems in time.

The observations of the control functions (actuarial function, risk management function, compliance and internal auditing) have to be given full attention and they have to report to the board at least quarterly. FSA has to be informed about all essential events of the company.

6. Termination of an Insurance Enterprise

In the termination of insurance business, it is usual to sell the business (first the technical reserves and the assets are transferred to another insurance company, and then a void company with no insurances is terminated). Reasons for termination can be for example:

- Lack of profitability. The buyer has maybe scale benefits to improve the profitability of the transferred insurances.
- Small size. If the company is very small compared to its mother group, it can be finished in spite of its favourable business prospects. Then the group cuts the small branches and focuses on the core business.
  Small size can be a challenge also from another point of view. The constantly growing regulation requires from companies big ICT investments and investments in actuarial functions and risk management. ICT investments can be unreasonably big for a small company and can lead to economically impossible outcome. Relativity principle does not help Finnish small companies, because they are anyway so big that relativity principle is not applied to them, but the requirements of Solvency II have to be complied completely.
- Solvency problems. Solvency II has increased solvency requirements for EU insurance companies to such extent that the owners of the companies have in many cases drawn their conclusions about the rising capital costs and sold either the whole company or those parts that require much solvency. This is how e.g., the Spanish bank Santander did, and retained in its life company risk life insurance and unit linked insurance. Buyers are often international reinsurance giants which try to balance their technical reserves. It is a good idea for an owner of an insurance company to execute annually a profitability test to compare fees from insurance sales and other possible benefits and the capital cost of the ownership. If the capital cost appears to be constantly bigger, it is time to start to search for a buyer for the company or parts of it. See also Voutilainen and Järvinen (2015).

A runoff state of a company or a part of its insurances means that no new insurances are written, but old clients are served. Nordic life insurance companies have, when the solvency requirements have tightened, quite largely moved their with-profits insurances to runoff state (Voutilainen and Ruuskanen, 2015). The Finnish life company Suomi was for a long time in runoff, until the remaining insurances were sold and the company was terminated.

7. Concluding Remarks

In the previous chapters we have discussed some of the most significant features of insurance company management. In the literature chapter 2 we mention research on various important topics of insurance management, but practical discussions on how to run an insurance company seem to be scarce. We hope that this study can at least partly fill that gap.

It can be noticed in the above chapters 3-6 that throughout the life cycle of an insurance company it is closely and rigorously supervised by the authority. This supervision has even tightened along Solvency II regulation. Bigger companies can manage this, but smaller have difficulties. This can cause mergers and acquisitions in the long run, some of them we have seen already.

References

Andreeva, T. (2020) 'Risk Management in the Insurance Company' *Ethics and Sustainability in Accounting and Finance* Vol. II, 131-138. DOI 10.1007/978-981-15-1928-4_7

Baione, F., De Angelis, P. and Granito, I. (2021) 'Capital Allocation and RORAC Optimization under Solvency 2 Standard Formula, *Annals of Operations Research* 299(1), 747-763. DOI 10.1007/s10479-020-03543-6

Beard, R., Pentikäinen, T. and Pesonen, E. (1990), Risk Theory – The Stochastic Basis of Insurance, Chapmann and Hall, London.

Bohnert, A., Gatzert, N. and Jörgensen, P. (2015) 'On the Management of Life Insurance Company Risk by Strategic Choice of Product Mix, Investment Strategy and Surplus Appropriation Schemes', *Insurance: Mathematics and Economics* 60, 83-97. DOI 10.1016/j.insmatheco.2014.11.003

Braun, A., Schmeiser,H. and Schreiber, F. (2017) 'Portfolio Optimization Under Solvency II: Implicit Constraints Imposed by the Market Risk Standard Formula', *Journal of Risk and Insurance* 84(1), 177-207. DOI 10.1111/jori.12077

Bühlmann, H. (2014) Mathematical Methods in Risk Theory, Springer, Berlin, Heidelberg.

Cadoni, P. (2009) 'Internal Models and Solvency II', Presented in AFIR Life Conference in Munich.

Chandnani, L. (2017) General Insurance, Reinsurance and Risk Management Glossary, Notion Press, Chennai.

Daykin, C., Pentikäinen, T. and Pesonen, M. (1994) Practical Risk Theory for Actuaries, Chapman and Hall, London.

Diacon, S.(ed.) (1990) A Guide to Insurance Management, Palgrave Macmillan, New York.

Dickson, D. (2017) Insurance Risk and Ruin, Cambridge University Press.

Floryszczak, A., Le Courtois, O. and Majri, M. (2016) 'Inside the Black Box: Net Asset Values and Solvency Capital Requirements with a Least-Squares Monte-Carlo Approach', *Insurance: Mathematics and Economics* 71, 15-26. DOI 10.1016/j.insmatheco.2016.07.005

Gatzert, N. and Martin, M. (2012) ‘Quantifying Credit and Market Risk under Solvency II: Standard Approach versus Internal Model, *Insurance: Mathematics and Economics* 51(3), 649-666. DOI 10.1016/j.insmatheco.2012.09.002

Gerstner,T., Griebel, M., Holtz, M., Goschnick, R. and Haep, M (2007) ‘A General Asset-Liability Management Model for the Efficient Simulation of Portfolios of Life Insurance Policies’, *Insurance: Mathematics and Economics* 42(2), 704-716. DOI: 10.1016/j.insmatheco.2007.07.007

Gorge, G. (2016) Insurance Risk Management and Reinsurance, Bibliotheque Nationale, Paris.

Hoang, T., Mehedy, L., Mohania, M., Abebe, E. (2017) ‘Blockhain-based Data Management and Analytics for Micro-insurance Applications’, CIKM’17, the ACM Conference on Information and Knowledge Management, 2539-2542.

Kasturi, R. (2006) ‘Performance Management in Insurance Corporation’, *Journal of Business Administration Online* 5(1), 16 pp.

Koller, M. (2011) Life Insurance Risk Management Essentials, Springer, Berlin, Heidelberg.

Korhonen, P. and Voutilainen, R. (2006) ‘Finding the Most Preferred Alliance Structure between Banks and Insurance Companies’, *European Journal of Operational Research* 175(2), 1285-1299. DOI 10.1016/j.ejor.2005.04.046

Laurent, J.-P., Norberg, R. and Planchet, F. (eds.) (2016) Modelling in Life Insurance – A Management Perspective, Springer, Switzerland.

Matis, C. and Ilies, L. (2014) ‘Customer Relationship Management in the Insurance Industry’, *Procedia Economics and Finance* 15, 1138-1145. DOI 10.1016/S2212-5671(14)00568-1

Mulvey, J. and Erkan, H. (2003), ‘Simulation for Risk Management: Risk Management of a P/C Insurance Company Scenario Generation, Simulation and Optimization, Proceedings of WSC’03, the 35th Conference on Winter Simulation: Driving Innovation, 364-371.

Mäenpää, I. and Voutilainen, R. (2011) ‘Value through Combined Offerings of Bank and Insurance’, *International Journal of Bank Marketing* 29(7), 535-554. DOI 10.1108/02652321111177812

Ronkainen, V., Koskinen, L. and Koskela,L. (2008), ’Challenges in Developing Internal Models for Solvency II’, Publications of the Finnish Insurance Supervisory Authority.

Sandström, A. (2016) Handbook of Solvency for Actuaries and Risk Managers, Theory and Practise, Chapmann and Hall, London.

Scherer, M., Stahl, G. (2021), ‘The Standard Formula of Solvency II: A Critical Discussion’, *European Actuarial Journal* 11(1), 3-20. DOI 10.1007/s13385-020-00252-z.

Torzi, L. (2015) 'An Analysis of Solvency II Standard Formula for Calculation of SCR, Possible Corrections and a Comparison with an Internal Model', Thesis, Universita Guido Carli.

Vazov, R. (2019) 'Innovative Approaches to Insurance Company Cash Flow Management, Contemporary Theoretical Aspects', VUZF Publishing House "St Grigorii Bogoslov, Sofia. ISBN: 978-954-8590-54-9

Voutilainen, R. (2021) 'Bancassurance: What has been written since 2006?', *Aalto University School of Business publication series (Business+Economy)* 4/2021. https://aaltodoc.aalto.fi/handle/123456789/109061.

Voutilainen, R. (2005) 'Comparing Alternative Structures of Financial Alliances', *The Geneva Papers on Risk and Insurance* 30(2), 327-342, DOI 10.1057/palgrave.gpp.2510026

Voutilainen, R. (2018) 'Riskienhallinta tänään – hyvän ja pahan päivän varalta' (Risk management today, in case of a good day and a bad day, in Finnish) in the book 'Riskienhallinnan ajankohtaisia teemoja' (Current themes in risk management), edited by A. Ahteensivu, L. Koskinen, J. Kulmala and P. Havakka. Tampere University Press, 29-44.

Voutilainen, R. and Järvinen, R. (2015) 'Bancassurance model transition from bank and customer viewpoints', working paper, Helsinki October 2015, 24 pp.

Voutilainen, R. and Koskinen, L. (2017) 'Customers' opinions on incentive based insurance', *Journal of Insurance and Financial Management* 3(1), 30-52.

Voutilainen, R. and Koskinen, L. (2019) 'Megatrends in the insurance and financial sector' in the book 'Leading change in a complex world: Transdisciplinary perspectives', edited by A. Kangas, J. Kujala, A. Heikkinen, A. Lönnqvist, H. Laihonen and J. Bethwaite. Tampere University Press, 321-339.

Voutilainen, R. and Ruuskanen, O.-P. (2015) 'On the effect of intensified regulation on the product strategy of Nordic life insurance companies', *Scandinavian Insurance Quarterly* 1, 2015, 17 pp.

Wegmann, G. (2008), 'The Balanced Scorecard as a Knowledge Management Tool: A French Experience in a Semi-public Insurance Company', *The ICFAI Journal of Knowledge Management* 6(3), 22-38.