

## The Existence Of Unit Link Products : Empirical And Juridical Review

Ardy Firman Syah\*<sup>1</sup>

<sup>1</sup>*National Research and Innovation Agency, DKI Jakarta,  
Indonesia*

### Abstract:

The purpose of this study is to obtain strategic steps for business actors in limiting the sale of unit-linked products based on the latest regulations through the factor analysis method. The methodology used is descriptive analysis with a qualitative approach. The literacy sources used come from primary data, namely literature reviews, mass media and applicable laws and regulations as well as secondary data on the Statement Of Financial Position from the Financial Services Authority to be further studied in measuring the parameters of the analysis of policy recommendations needed next. The results of the study show that the high level of risk in marketing unit-linked products with the PAYDI system is still limited by the placement of investment funds that are medium risk, insurance sector business actors can provide recommendations on the placement of funds made by customers based on the quality of the investment manager's portfolio and investment categories that are not based on high risk. Fixed unit link products provide an appropriate margin for business actors through periodic top up administration fees. The element of protection from cash value remains the basis of the priority of this unit link marketing.

JEL: G22, I13

### Keywords:

Unit Link, Regulation, Protection,  
Investment

### Corresponding Author:

Ardy Firman Syah

### Email:

[ardyfirmansyah24@gmail.com](mailto:ardyfirmansyah24@gmail.com)

DOI: 10.20961/bfde.v6i1.104127



## 1. Introduction

Insurance is a financial product that has the benefit of protecting oneself from various risks of financial loss. Insurance products are divided into two, namely traditional (pure) insurance and unit link insurance. Unit-linked insurance is an insurance contract that provides protection benefits with low premiums as well as investment. This type of insurance provides death and investment insurance protection benefits at the same time. Currently, unit-linked insurance that is packaged in a modern way is developing very rapidly in Indonesia.

This rapid development is certainly related to the benefits of return on investment and protection from insurance obtained by unit-linked customers. Although it is growing rapidly, some people do not understand the benefits and risks of this unit-linked product. Several cost components that must be paid by customers, in addition to insurance costs, are administrative fees, premium allocation costs, and investment management costs. The amount of this unit link fee depends on the policy of each insurance company (WIDANA and JAYANEGARA 2019).

Unit-linked insurance products are life insurance policies that incorporate financial elements. Unit-linked life insurance comprises two essential elements: protection and investment. The protection component pertains to the total sum insured in the occurrence of an insured risk and the investment.

The component denotes the policyholder's account that reflects the present unit value of the chosen investment fund. A unit-linked life insurance policy with a guaranteed asset value is an insurance contract that disburses benefits upon death or maturity, comprising an amount exceeding the guaranteed sum and the unit value of the investment fund. A significant challenge is to the price of minimum death benefits and maturity benefits, as well as the formulation of suitable reserves for these guarantees.

Furthermore, in the research of Cristina and Diana-Maria (2015) stated A unit-linked insurance policy is a life insurance product that has an investing element. A crucial aspect of insurance companies' operations is the investment of premiums received from policyholders in various asset classes, aiming to achieve returns that exceed those guaranteed by insurance contracts, while ensuring sufficient liquidity for the settlement of claims arising from covered risks. This research enhances the current literature on investment alternatives by specifically examining investments in unit-linked life insurance. This study prominently features a comparison of investments in unit-linked insurance against other financial instruments, including savings, securities, equities (BET), currencies (EURO), and gold. (Iqbal, Novkaniza, and Novita 2017) stated that Unit-linked insurance is a type of insurance that is associated with investments, wherein the benefits derived are contingent upon the investment of premiums. Currently, the predominant insurance product in the industry is unit-linked insurance featuring guaranteed benefits.

The provision of guaranteed benefits renders insurance benefits analogous to the repayment structure of European call options. Consequently, the pricing of European call options is integral to the cost of unit-linked insurance with guaranteed benefits. The dynamics of investment returns are presumed to adhere to the stochastic interest rate. Consequently, the size change method is employed in the pricing of unit-linked insurance. The discount factor with the stochastic interest rate must be adjusted to represent the price of zero-coupon bonds as well. Finally, insurance premiums are calculated on the principle of equality with guaranteed benefits and explicit insurance periods.

Unit linked products, a combination of life insurance and investment, have long been one of the mainstay products in the Indonesian insurance industry. However, in recent years, this product has been in the spotlight due to various problems that cause dissatisfaction among consumers. Problems related to claims are also a significant issue. Some customers find it difficult when submitting insurance claims, either because the terms are considered complicated or because of the lack of information from the beginning of the contract. This triggered distrust of insurance companies. Some of the main issues that often arise are the lack of customer understanding, many customers feel that they do not get a clear enough explanation of the risks and mechanism of unit linking. In some cases, insurance agents overemphasize the potential profit of an investment without providing an in-depth understanding of the risks, administrative costs, and possible losses. This leads to unrealistic expectations of investment returns. Then, high cost and transparency where unit-linked products often have high costs, including insurance, administration, and investment management costs. However, the details of these costs are often not explained transparently to customers, so they feel disadvantaged when the value of the investment does not grow as expected.

On the other hand, there is a disappointing investment performance where many customers complained about the results of unit link investments that were far below expectations. Market

fluctuations, suboptimal selection of investment instruments, and high costs often make unit-linked investment results not proportional to the risks taken by customers. The inconsistency of the risk profile is also often a crucial issue of several unit-linked products sold to customers without paying attention to their risk profile. As a result, these products often do not match the needs or risk tolerance of customers, especially for those who should choose products with lower risk. Then from the policy makers' side, even though the Financial Services Authority (OJK) has issued various regulations to tighten supervision of unit-linked products, its implementation still faces challenges. Education for agents and customers, as well as supervision of product marketing, is often not optimal.

#### Problem Statement

To discuss the criteria for the theme mentioned above, several problem formulations are prepared by making the following research questions .

- A. How is the implementation of the latest regulations by looking at the problems in existing unit link products?
- B. How to sharpen the implementation of unit-linked product regulations on their correlation with businesses in several Indonesian companies?

## 2. Methodes

The methodology used is descriptive analysis with a qualitative approach. The literacy sources used come from primary data, namely literature reviews, mass media and applicable laws and regulations as well as secondary data on the Statement Of Financial Position from the Financial Services Authority to be further studied in measuring the parameters of the analysis of policy recommendations needed next.

To answer the formulation of the problem, it is necessary to search for data through literature search that is in accordance with the theme. Literature searches were carried out using the keywords Insurance, Unit Link and OJK Circular Letter No. 5 of 2022 Concerning Insurance Products Linked to Investment. The search results obtained are then selected to be reviewed according to the topic. The search results obtained are then selected to be reviewed according to the topic for further analysis.

## 3. Results And Discussion

Based on the results of the analysis and synthesis of the search results using inclusion criteria, this discussion is focused on two main themes, namely (1) Unit Link Insurance related to OJK Circular Letter No. 5 of 2022 concerning Insurance Products Linked to Investment, (2) Regulations related to Insurance, Unit Link and OJK Circular Letter No. 5 of 2022 concerning Insurance Products Linked to Investment.

### *Unit Link Insurance related to OJK Circular Letter No. 5 of 2022 Concerning Insurance Products Linked to Investment.*

Unit-linked insurance policies, such as Unit Link insurance, operate by maintaining a separate asset account for each policyholder, allowing them to independently invest in a consolidated fund chosen by the policyholder, unlike traditional return-based policies (Richards 2014). These policies combine insurance with investment, offering benefits such as high growth potential, life risk coverage, and tax benefits (Saini 2011). To prevent disputes in unit-linked insurance, the principle of maximum good faith must be applied by policyholders and insurance agents, in addition to enhanced supervision by the Financial Services Authority (OJK) (Fauzi 2023). Research on units linking insurance with death benefits for co-living using stochastic calculations shows expected benefits and death benefits based on participant age and premium payments (MURNIASIH, WIDANA, and JAYANEGARA 2022). In addition, an analysis of unit-linked insurance products in Indonesia revealed various costs of death,

premiums, returns, and benefits, with some plans requiring top-up premiums to meet the guarantee (WIDANA and JAYANEGARA 2019). DIANITA, WIDANA, and JAYANEGARA (2022) stated that Unit-linked is an insurance plan connected to investment. The purchaser is required to pay a premium and will get investment returns and death benefits in the case of demise throughout the policy term. It is essential for the corporation to assess the cash flow within the unit-linked product, referred to as profit testing. This study aims to evaluate the profit testing of unit-linked insurance businesses using a stochastic methodology, focusing on the computation of policy value. This study employed a stochastic technique with a lognormal model for profit testing calculations. This study concludes that the profit testing calculations for plans issued to individuals aged 25, 35, 45, and 55 yield a favorable Net Present Value. Nonetheless, the revenues generated diminish as the covered individuals age. The computation findings indicate that the reserve value can accommodate greater risks than quantitative reserves. C. Cristina and Diana-Maria (2014) a notable life insurance product that has recently developed in the Romanian insurance market is unit-linked contracts.

Gatzert and Kraus (2024) examined the significance of sustainable product qualities in relation to sustainable costs and risk-reward profiles during individuals' selection of underlying funds for unit-linked life insurance. The findings indicate that private investors in unit-linked life insurance appreciate the characteristics of sustainable products, demonstrating a marginal readiness to pay a premium; however, risk-reward metrics and, notably, sustainable costs are presently more significant. The research additionally revealed that sustainability characteristics are of lesser significance in unit-linked life insurance policies than in savings plan arrangements.

Hanna, Hieber, and Devolder (2022) stated that in many countries, a trend to unsecured unit-linked plans has resulted from falling interest rates, which have decreased interest in classic participation life insurance contracts with investment guarantees. A novel blended insurance contract that divides premium payments between unit-linked and participatory funds was created as part of the study. Unit-linked returns are subject to additional collateral fees in order to boost the participation fund's investment collateral. The findings indicate that in both unit-linked and participatory contracts, mixed products are typically viewed as more appealing than complete investment. For conservative investors seeking more robust loss protection, the collateral cost is advantageous. From a marketing standpoint, it's also intriguing: Zero or negative assurance levels can be prevented by increasing the assurances in participation products.

Bosserhoff and Stadje (2021) consider the problem of selecting a mean-variance portfolio that is consistent with the time of the insurer and permits underlying risk (mortality) to be included. The Nash subgame's perfect equilibrium was found to be the ideal solution. The researchers defined the ideal approach as a solution to the extended Hamilton–Jacobi–Bellman (HJB) system, which is a partial integro-differential equation (PIDE) system. The study's findings demonstrate that, of course, the equilibrium is a solution to the extended HJB system. Researchers were able to give an optimal trading strategy in a closed form and achieve an explicit solution for the extended HJB system under specific conditions. According to a simulation, the previously identified approach generates a high expectation and variation about the distribution of the stock surge's size. When the variance is accurately measured but mistakenly ascribed to the mere diffusion component, the same thing happens. Additionally, we demonstrate that variations in long-lived asset maturity dates and insurance horizons do not increase the variance of terminal wealth.

Van der Heide (2020) describes and explains the shift in the way The manner that financial uncertainty is managed in UK life insurance has shifted from traditional multipolar arrangements that centre on actuarial prudence to a bipolar system that uses risk-based capital logic and explicit risk quantification to "individualise" financial risk. Two factors are identified in the study as being crucial to achieving this change: the dynamics of competition that emerged with the rise of challenger "unit-linked"

insurance companies in the 1960s, and changes in professional ecology, which are exemplified by the evolving relationship between insurance supervisors and the actuarial profession.

Maghfiroh and Satyahadewi (2021) used the point-to-point technique with a minimum guarantee and stamp value to calculate the value of the net single premium of a k-year unit-linked dual-purpose life insurance policy. Stock price variations between the start and finish of the policy contract are not taken into account by the point-to-point technique of investment returns, which is based on the difference between the stock price at maturity and the stock price at the commencement of the policy contract. The study makes use of January 2013 BI interest rate data as well as daily closing stock data from PT. Summarecon Agung Tbk in 2012. For a 25-year-old man with a 5-year insurance period, an initial share price of IDR 620, and the number of shares to be bought, the analysis's findings came from the single net premium of a k-year unit-linked dual purpose life insurance using the point-to-point method with a minimum guarantee and stamp value of 2,500 shares, which is IDR 1,517,749.

*Regulations related to Insurance, Unit Link and OJK Circular Letter No. 5 of 2022 concerning Insurance Products Linked to Investment*

In 2022, the insurance sector has seen significant regulatory changes, especially regarding unit-linked insurance products. The latest regulations include the application of the principle of perfect honesty for policyholders and insurance agents to prevent disputes (Fauzi, 2023). The need for regulatory changes in unit-linked life insurance products has been emphasized due to the many complaints and defects in these products, highlighting the need for tailored regulations to improve consumer protection and information exchange (Kowalczyk-Rólczyńska and Pisarewicz 2015). In addition, there are calls for additional legal arrangements and frameworks for unit-linked life insurance products to ensure proper legal coverage and address the evolving landscape of life insurance products (Dacev 2015). Salviana, Krisnadi Nasution, and Evi Kongres (2023) stated that a profit-and-loss investment is what unit-linked life insurance is. Additionally, the premiums paid differ from those paid for regular life insurance. The primary legal protection for the insured is internal, based on the principles of openness and good faith. The insured should be mindful of the date of contract formation to avoid disagreements and the insurer's interpretation of adding a clause explaining unit-linked life insurance, particularly in relation to the insured's rights, to the policy or other media. In order to attain justice, this study proposes the idea of legal protection for holders of unit-linked life insurance from the perspective of contracts and the oversight of the appropriate authorities.

Parinduri and Yusrizal (2023) stated that the idea of purchasing sharia life insurance based on unit-links is the practice of purchasing assets in the form of tabarru in an attempt to safeguard one another and assist several individuals or parties who offer a pattern of return in overcoming specific risks through contracts that adhere to sharia principles, where unit-linked is an investment instrument; Sharia life insurance is a brand-new contract type that has never been used in the history of Islamic fiqh. Scholars who oversee and forbid life insurance have differing views, and because life insurance currently has intolerant premiums, it is more of a speculative contract with gambling and betting components.

Gaganis, Hasan, and Pasiouras (2020) conducted a study by sketching the effect of insurance rules on the life insurance industry, demonstrating a strong inverse relationship between industrial development and supervisory restrictions on the state of pension products and life annuity plans. The study's findings indicate that the best regulatory predictors of the life insurance premiums to GDP ratio in different nations are capital requirements, pension products, and supervisory supervision over life annuity policy conditions. These findings hold true when demographic, economic, cultural, religious, and other regulations are taken into account. This outcome also holds true when life insurance premiums per capita are substituted for the premiums to GDP ratio. The use of life insurance is not substantially impacted by other rules, such as technical provisions, investment-related regulations, supervisory controls on premium rate structures, and premium rate controls.

Ostrowska-Dankiewicz (2019) this study describes the phenomenon that has occurred in recent years in the Polish life insurance market, which requires investors in insurance products to take remedial protective actions. By describing the process of changing regulations and regulatory standards, the strategies adopted and implemented in the development of protection policies, the review of the most significant legal regulations, solutions for improving product transparency, and the creation of a new life insurance policy model to highlight pro-consumer activities, the essence and underlying assumptions of the new financial market paradigm are discussed. The study's practical implications stem from its analysis of the primary issues facing Poland's life insurance market. It demonstrates the potential for implementing suitable solutions in the insurance distribution sector based on the most recent legal regulations, recommendations, and consumer needs. It also establishes new standards and practices that raise the level of consumer security and may pave the way for the future growth of the investment product market.

Chen and Hieber (2016) stated that in exchange for the policyholder's return guarantee, the insurer in a common equity-related life insurance contract is entitled to a share of the surplus return. Both parties may be forced to begin a less-than-ideal insurance contract, nevertheless, due to a set of contractual conditions that permit it to be constrained by regulatory default limits. This study demonstrates that more flexible regulatory rules can lessen this effect. Researchers recommend that traffic light systems be put in place by authorities to force businesses to lower the risk associated with their faulty asset allocation. It is demonstrated that the implementation of such a system can improve policyholder benefits without degrading insurance firms' benefits within a utility-based framework. At the same time, it is possible to lower the likelihood of default and, consequently, the solvency capital required. Luca (2018) investigates the factors that influence the decision to buy interest rate guarantees, which might provide us additional insight into the reasons why consumers buy these features to avoid financial difficulties.

Knowing how much consumers are prepared to pay for features that guarantee they are shielded from financial danger is crucial in the current financial climate. Specifically, these characteristics add another level of expense for insurers, who must employ costly risk management strategies to provide assured returns. The study suggests a framework wherein people's degree of financial literacy moderates the relationship between using prevention as an investment strategy and their intention to buy interest rate guarantees, and perceptions of unit-linked insurance mediate this interaction. Huber and Schlager (2018) highlight the link between basic attitudes, product perceptions, and the intention to buy items in the setting of highly relevant unit-linked life insurance in order to explain the antecedents of financial decision-making. As a feel-good element in the decision-making process, the inclusion of investment guarantees offers even more alluring product characteristics that raise risk. Finally, with regard to risk as an analytical element of the decision-making process, financial literacy education can enhance consumers' knowledge of financial products marketed by government agencies as well as insurance companies by elucidating the features and risks of the product to impact the financial decision-making process.

Ceci, Colaneri, and Cretarola (2017) investigated the hedging issue of life insurance contracts associated with units through a local risk minimization approach, when insurance companies have limited information in the market. The endowment insurance contract, which combines a pure endowment and a term insurance policy, was taken into consideration by the researcher. Its ultimate value is determined by the stock market trend during which the policyholder pays the premiums. Ceci, Colaneri, and Cretarola (2015) investigated a local risk minimisation strategy for a combined insurance-financial model in which insurance companies are subject to informational limitations. The researchers specifically anticipated that insurers could track the number of fatalities from a specific portfolio of covered individuals at any given moment, but not the degree of death risk. In order to hedge the value of life insurance contracts linked to units using a local risk minimisation strategy with incomplete

information, the study takes into account financial markets that are influenced by general semi-martingale.

Siswanto, Olivia, and Hayati (2022) analyzed unit-linked life insurance products reviewed based on insurance law and investment law. This unit-linked life insurance product is intended to further attract the public in insurance where in addition to providing protection features, the product also provides investment features for policyholders. Kurniasih, Admiral, and Fudika (2024) studied how the consumer protection portal is used in accordance with Regulation of the Financial Services Authority Number 31/POJK.07/2020 Year 2020 Concerning the Implementation of Consumer and Community Services in the Financial Services Sector by the Financial Services Authority, and how consumer protection in the Financial Services Sector and Consumer Dispute Resolution by the Financial Services Authority. This research is very important because previous research has not addressed this topic. This research uses normative juridical. The results of the study show that Law No. 21 of 2011 Concerning the Financial Services Authority allows consumer protection portals. If disputes in the financial services sector are not resolved through a Financial Services Institution, they will be followed by settlement in court or outside.

The APPK practice should continue to be widely employed, according to courts, and the system should be upgraded to optimise the application of legal protection through the principles of transparency and openness of information. Titik Rianawati and Sabtarini Kusumaningsih (2021) stated that unit-linked insurance is one of the most widely offered financial products by financial institutions. Many customers are interested because of some of the benefits that are usually promised by their selling agents. One of the advantages that is indeed very tempting is that we can get 2 benefits at once, namely protection (insurance) and investment. However, because of its complicated nature, prospective customers before deciding to use it, it would be better to understand, understand, and learn it first so that later there will be no misunderstanding of unit-linked insurance products. Santri and Fauzi (2023) there are several provisions for regulating Unitlink Life Insurance, namely the Civil Code, the Commercial Code, Law No. 40 of 2014 Concerning Insurance Business, and OJK provisions. The legal protection of unitlink life insurance policyholders has been affirmed in Article 53 of Law No. 40 of 2014 Concerning Insurance Business that insurance companies are obliged to register policy guarantors with policy guarantee institutions, other provisions regarding the legal protection of policyholders are also contained in Law No. 8 concerning Consumer Protection which regulates the rights, rights and obligations of consumers as policyholders and the obligations of insurance companies as producers. In the future, it is necessary to have rules for the enforcement of insurance companies' obligations in making firm and detailed claim payments in order to fulfill the rights of policyholders. Wulandari and Sarjana (2022) identify and review various forms of regulations that apply to the Financial Services Authority (OJK) regarding the function of regulating and supervising Unit Linked insurance products and analyze the role of OJK on the Underlying Investment of Unit Linked insurance products. The role of the Financial Services Authority as a financial regulator in the banking and non-bank sectors for the Underlying Investment of Unit Link insurance products plays a very important role. It is appropriate for the OJK to be obliged to comply with and also carry out a regulatory and supervisory role, especially regarding the principle of prudence that underlies the protection of insurance policy users or customers. Herayani (2020) conducted a research that aimed to find out the legal protection provided by AJB Bumiputera 1912 Brebes Company for the fulfillment of the rights of the insured of Unit Link life insurance. The results of the study show that the implementation of Unit Link life insurance in AJB Bumiputera 1912 Brebes Company is not in accordance with the Decree of the Chairman of the Capital Market and Financial Institutions Supervisory Agency Number KEP-104/BL/2006 Concerning Unit Link Products, namely regarding the amount of natural death insurance and also related to the investment strategy for Unit Link. The insurance policy is a form of legal protection for the insured of Unit Link life insurance provided by AJB Bumiputera 1912 Brebes Company, the rights of the insured of Unit Link life insurance are also protected by Regulation of the Minister of Finance Number 53/PMK.010/2012 Concerning the Financial Health of Insurance Companies and Reinsurance Companies; Law Number 8 of 1999 Concerning Consumer Protection; Law No. 40 of 2014 Concerning Insurance Business.

Rahman and Kurniasari (2023) conducted this study to determine the legal protection for Insurance customers who take Unit Link products against the risk of decreasing investment value. The research approach used is a normative legal research approach to find out whether the rights of insurance customers in choosing insurance products in Indonesia have been accommodated by the Insurance Law. Legal protection for customers against the risk of declining investment value has been accommodated by the state through Law No. 40 of 2014 Concerning Insurance Business. Article 22 paragraph (4) requires providing information about the financial position, financial performance and risks it faces to interested parties in a manner that is in accordance with the provisions of laws and regulations as a preventive measure and Article 71 paragraphs (1) and (2) regulate administrative sanctions and Article 74 paragraph (2) regulates criminal sanctions as a repressive measure. That is, in terms of legal instruments. The state has been present to protect its citizens as Unit Link customers. Only the implementation of its enforcement still needs intense attention considering the lack of knowledge of law enforcement officials in terms of insurance.

#### **4. Conclusion**

Unit-linked insurance is defined as insurance that is connected to investment, meaning that the benefits are the outcome of premium investment, according to the findings of the analysis and synthesis. Unit-linked insurance with guaranteed benefits is currently the most extensively promoted insurance product in the market. One type of insurance product related to investments is unit-linked. In addition to receiving investment returns and death benefits in the event of death within the policy period, the buyer is required to pay a premium. The two key elements of unit-linked life insurance are investment and protection. The policyholder's account, which represents the current unit value of the chosen investment fund, is referred to as the investment component, while the protection component is the amount protected in the case of an insured risk. An insurance policy that pays benefits at maturity or at death that exceeds both the guaranteed sum and the investment fund's unit value is known as a unit-linked life insurance policy with guaranteed asset value. Unit-linked life insurance products have been the subject of several complaints and faults, which has highlighted the need for specific legislation to enhance information sharing and consumer protection. There are several provisions for regulating Unitlink Life Insurance, namely the Civil Code, the Commercial Code, Law No. 40 of 2014 Concerning Insurance Business, and OJK provisions. The legal protection of unitlink life insurance policyholders has been affirmed in Article 53 of Law No. 40 of 2014 concerning Insurance Businesses that insurance companies are obliged to register policy guarantors with policy guarantee institutions, other provisions regarding the legal protection of policyholders are also contained in Law No. 8 concerning Consumer Protection which regulates the rights, rights and obligations of consumers as policyholders and the obligations of insurance companies as producers.



## References

- Bosserhoff, Frank, and Mitja Stadje. 2021. "Time-Consistent Mean-Variance Investment with Unit Linked Life Insurance Contracts in a Jump-Diffusion Setting." *Insurance: Mathematics and Economics* 100 (September):130–46. <https://doi.org/10.1016/j.insmatheco.2021.03.015>.
- Ceci, Claudia, Katia Colaneri, and Alessandra Cretarola. 2015. "Hedging of Unit-Linked Life Insurance Contracts with Unobservable Mortality Hazard Rate via Local Risk-Minimization." *Insurance: Mathematics and Economics* 60 (January):47–60. <https://doi.org/10.1016/j.insmatheco.2014.10.013>.
- . 2017. "Unit-Linked Life Insurance Policies: Optimal Hedging in Partially Observable Market Models." *Insurance: Mathematics and Economics* 76 (September):149–63. <https://doi.org/10.1016/j.insmatheco.2017.07.005>.
- Chen, An, and Peter Hieber. 2016. "OPTIMAL ASSET ALLOCATION IN LIFE INSURANCE: THE IMPACT OF REGULATION." *ASTIN Bulletin* 46 (3): 605–26. <https://doi.org/10.1017/asb.2016.12>.
- Cristina, C., and C. Diana-Maria. 2014. "Pricing and Assessing Unit-Linked Insurance Contracts with Investment Guarantees." *Annals of Faculty of Economics* 23 (1): 17–22. <https://anale.steconomieuoradea.ro/en/2014/07/28/1st-issue-july-tom-23-2014/>.
- Cristina, Ciumas, and Chis Diana-Maria. 2015. "Unit-Linked Life Insurance Products Versus Other Alternative Investments." *Knowledge Horizons Economic* 7 (3): 222–27. <https://ideas.repec.org/a/khe/journal/v7y2015i3p222-227.html>.
- Dacev, Nikola. 2015. "The Necessity of Legal Arrangement of Unit-Linked Life Insurance Products. ." *UTMS Journal of Economics* 8 (3): 259–69. <https://ideas.repec.org/a/ris/utmsje/0219.html>.
- DIANITA, ULFA, I NYOMAN WIDANA, and KETUT JAYANEGARA. 2022. "PERHITUNGAN PROFIT TESTING MELALUI PENDEKATAN STOKASTIK PADA ASURANSI UNIT LINK." *E-Jurnal Matematika* 11 (4): 235. <https://doi.org/10.24843/MTK.2022.v11.i04.p387>.
- Fauzi, Wetria. 2023. "INVESTMENT-BASED INSURANCE DISPUTE PREVENTION (UNITLINK) IN INDONESIA." *UNES Law Review* 5 (3): 1003–12. <https://doi.org/10.31933/unesrev.v5i3.435>.
- Financial Institutions Supervisory Agency Number KEP-104/BL/2006 Concerning Unit Link Products.
- Gaganis, Chrysovalantis, Iftekhhar Hasan, and Fotios Pasiouras. 2020. "Cross-Country Evidence on the Relationship between Regulations and the Development of the Life Insurance Sector." *Economic Modelling* 89 (July):256–72. <https://doi.org/10.1016/j.econmod.2019.10.024>.
- Gatzert, Nadine, and Anna Kraus. 2024. "Do Sustainability Attributes Play a Role for Individuals' Decisions Regarding Unit-Linked Life Insurance? A Survey Research on German Private Investors." *The Geneva Papers on Risk and Insurance - Issues and Practice* 49 (4): 719–46. <https://doi.org/10.1057/s41288-024-00313-4>.
- Hanna, Vanessa, Peter Hieber, and Pierre Devolder. 2022. "Mixed Participating and Unit-Linked Life Insurance Contracts: Design, Pricing and Optimal Strategy." *Scandinavian Actuarial Journal* 2022 (5): 421–46. <https://doi.org/10.1080/03461238.2021.1992001>.
- Heide, Arjen van der. 2020. "Making Financial Uncertainty Count: Unit-linked Insurance, Investment and the Individualisation of Financial Risk in British Life Insurance." *The British Journal of Sociology* 71 (5): 985–99. <https://doi.org/10.1111/1468-4446.12783>.
- Herayani, P. 2020. "Perlindungan Hukum Bagi Tertanggung Pada Asuransi Jiwa Unit Link (Studi Pada Perusahaan AJB Bumiputera 1912 Brebes)." *Al Qodiri: Jurnal Pendidikan, Sosial Dan Keagamaan*, 18 (1): 57–67. <https://ejournal.kopertais4.or.id/tapalkuda/index.php/qodiri/article/view/3686>.
- Huber, Carin, and Tobias Schlager. 2018. "Testing the Risk as Feeling and Risk as Analysis Perspective for Insurance: The Antecedents of Purchasing Unit-Linked Life Insurance Products." *Journal of Financial Services Marketing* 23 (1): 25–37. <https://doi.org/10.1057/s41264-018-0040-2>.
- Iqbal, M., F. Novkaniza, and M. Novita. 2017. "Pricing Unit-Linked Insurance with Guaranteed Benefit." In , 030139. <https://doi.org/10.1063/1.4991243>.
- Kowalczyk-Rólczyńska, P, and P Pisarewicz. 2015. "Unit-Linked Life Insurance in View of the New Act *Bulletin of Fintech and Digital Economy (BFDE) Vol. 6, No. 2, 2025*

- on Insurance and Reinsurance Activities." *Insurance Review* 4 (1): 39–51. <https://piu.org.pl/public/upload/ibrowser/WU%204%202015/WU%202015-04%2004%20kowalczyk-rolczynska%20pisarewicz%20en.pdf>.
- Kurniasih, Esy, Admiral Admiral, and Moza Dela Fudika. 2024. "Kehadiran Aplikasi Portal Perlindungan Konsumen Di Sektor Jasa Keuangan." *JURNAL USM LAW REVIEW* 7 (1): 462–74. <https://doi.org/10.26623/julr.v7i1.8726>.
- Law No. 21 of 2011 Concerning the Financial Services Authority.
- Law No. 40 of 2014 Concerning Insurance Business.
- Law Number 8 of 1999 Concerning Consumer Protection.
- Luca, Daliana. 2018. "Does Prevention as an Investment Strategy Explain the Intention to Purchase Guarantees for Unit-Linked Life Insurance?" *Journal of Financial Services Marketing* 23 (3–4): 153–67. <https://doi.org/10.1057/s41264-018-0052-y>.
- Maghfiroh, F, and Neva Satyahadewi. 2021. "Analisis Premi Tunggal Bersih Asuransi Jiwa Dwiguna K-Tahun Unit Link Menggunakan Metode Point to Point Dengan Garansi Minimum Dan Nilai Cap." *Bimaster* 10 (1): 33–42.
- MURNIASIH, NI KETUT AYU, I NYOMAN WIDANA, and KETUT JAYANEGARA. 2022. "PRODUK UNIT LINK UNTUK JOINT LIFE MENGGUNAKAN PENDEKATAN STOKASTIK." *E-Jurnal Matematika* 11 (2): 106. <https://doi.org/10.24843/MTK.2022.v11.i02.p368>.
- OJK Circular Letter No. 5 of 2022 Concerning Insurance Products Linked to Investment.
- Ostrowska-Dankiewicz, Anna. 2019. "Consumer Protection Policy in the Polish Life Insurance Market in the Aspect of Current Legal Regulations." *Investment Management and Financial Innovations* 16 (4): 168–80. [https://doi.org/10.21511/imfi.16\(4\).2019.15](https://doi.org/10.21511/imfi.16(4).2019.15).
- Parinduri, Islah Rizky, and Yusrizal Yusrizal. 2023. "Hukum Berinvestasi Pada Asuransi Jiwa Syariah Berbasis Unit Link Pada PT. Prudential Life Assurance Binjai." *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah* 8 (2): 1355–66. <https://journal.um-surabaya.ac.id/index.php/Mas/article/view/19467>.
- Rahman, Arif, and Tri Widya Kurniasari. 2023. "Perlindungan Hukum Nasabah Unit Link Dalam Risiko Penurunan Nilai Investasi." *REUSAM: Jurnal Ilmu Hukum* 11 (1): 13. <https://doi.org/10.29103/reusam.v11i1.10766>.
- Regulation of the Financial Services Authority Number 31/POJK.07/2020 Year 2020 Concerning the Implementation of Consumer and Community Services in the Financial Services Sector by the Financial Services Authority.
- Regulation of the Minister of Finance Number 53/PMK.010/2012 Concerning the Financial Health of Insurance Companies and Reinsurance Companies.
- Richards, Stephen. 2014. "Unit-Linked Business." In *Wiley StatsRef: Statistics Reference Online*. Wiley. <https://doi.org/10.1002/9781118445112.stat04370>.
- Saini, N. 2011. "Unit Linked Insurance Plans – a Comparative Study of Selected Insurance Companies in Haryana and Punjab." *Journal of Banking Financial Services and Insurance Research* 1 (3): 119–27. <https://www.semanticscholar.org/paper/Unit-linked-insurance-plans-%E2%80%93-a-comparative-study-Saini/e0c2006d769b1088f6737f6777a2987954410da1>.
- Salviana, Fries Melia, Krisnadi Nasution, and Evi Kongres. 2023. "PERLINDUNGAN HUKUM TERHADAP TERTANGGUNG DALAM ASURANSI JIWA UNIT-LINK." *Perspektif* 28 (1): 19–24. <https://doi.org/10.30742/perspektif.v28i1.851>.
- Santri, Selvi Harvia, and Wetria Fauzi. 2023. "Pengaturan Perjanjian Asuransi Jiwa Unitlink Dalam Kaitannya Dengan Perlindungan Hukum Pemegang Polis." *Unes Law Review* 6 (1): 3581–89.
- Siswanto, A. H, F Olivia, and N Hayati. 2022. "Asuransi Jiwa Unit Link Ditinjau Dari Hukum Asuransi Dan Hukum Investasi. ." *Lex Jurnalica* 19 (3): 400–409.
- Tititk Rianawati, and Sabtarini Kusumaningsih. 2021. "Mengenal Unit Link : Asuransi Dengan Fitur Investasi ( Get To Know Unit Link : Insurance With Investment Features)." *Jurnal Visi Manajemen* 7 (3): 157–65. <https://doi.org/10.56910/jym.v7i3.174>.

- WIDANA, I NYOMAN, and KETUT JAYANEGARA. 2019. "ANALISIS PRODUK ASURANSI UNIT LINK DI INDONESIA." *E-Jurnal Matematika* 8 (1): 42. <https://doi.org/10.24843/MTK.2019.v08.i01.p233>.
- Wulandari, T. A, and I Made Sarjana. 2022. "Peran Otoritas Jasa Keuangan Dalam Pengaturan Dan Pengawasan Underlying Investment Dari Produk Asuransi Unit Link." *Jurnal Kertha Negara* 10 (5): 519–23. <https://jurnal.harianregional.com/kerthanegara/id-91880>.